Appendix M

NOISE ANALYSIS

URBAN CROSSROADS

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CALIFORNIA CROSSINGS
TPM 21046, P06-102, ER 93-19-06AA
EIR NOISE STUDY
COUNTY OF SAN DIEGO, CALIFORNIA

June 28, 2010

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CALIFORNIA CROSSINGS
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1.0 EXECUTIVE SUMMARY

A noise study has been completed to determine the noise impacts associated with the development of the proposed California Crossings Project located north of Otay Mesa Road and west of Harvest Road in the County of San Diego. The project is proposed to develop 325,502 square feet of retail commercial center on 28.50 net acres.

The purpose of this noise assessment is to evaluate the noise impacts for the project study area and to recommend noise mitigation measures, if necessary, to minimize the potential project impacts.

1.1 Off-Site Transportation Noise Analysis

The project does create a direct impact of more than 3.0 dBA CNEL on one segment of Otay Mesa Road, Airway Road, Sanyo Avenue and Paseo De Las Americas. No noise sensitive land uses exist or are proposed along these segments therefore the project's direct noise contributions to off-site roadway segments will not cause any significant impacts

There are cumulative impacts of more than 3.0 dBA CNEL on two segments of Otay Mesa Road, two segments of SR-905, one segment of Airway Road, Siempre Viva Road, Sanyo Avenue and Paseo De Las Americas, please refer to Table 6-9. The project will contribute more than a 1 dBA CNEL cumulative increase along the two segments of Otay Mesa Road, one segment of Airway Road, Sanyo Avenue and Paseo De Las Americas. No sensitive land uses exist or are proposed along these roadway segments and therefore no impacts will occur.

The only roadway segment with existing or proposed noise sensitive land uses is along Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive. Three homes exist along this segment of Otay Mesa Road. However with the construction of SR-905, traffic will be diverted and the traffic volumes and subsequent noise levels will be lower in the near term cumulative conditions. The project will result in a direct noise increase of 2.5 dBA CNEL and a cumulative increase of only 0.8 dBA CNEL. Therefore, the proposed project's contributions to off-site roadway noise increases will not cause any significant impacts to any existing or future noise sensitive land uses.

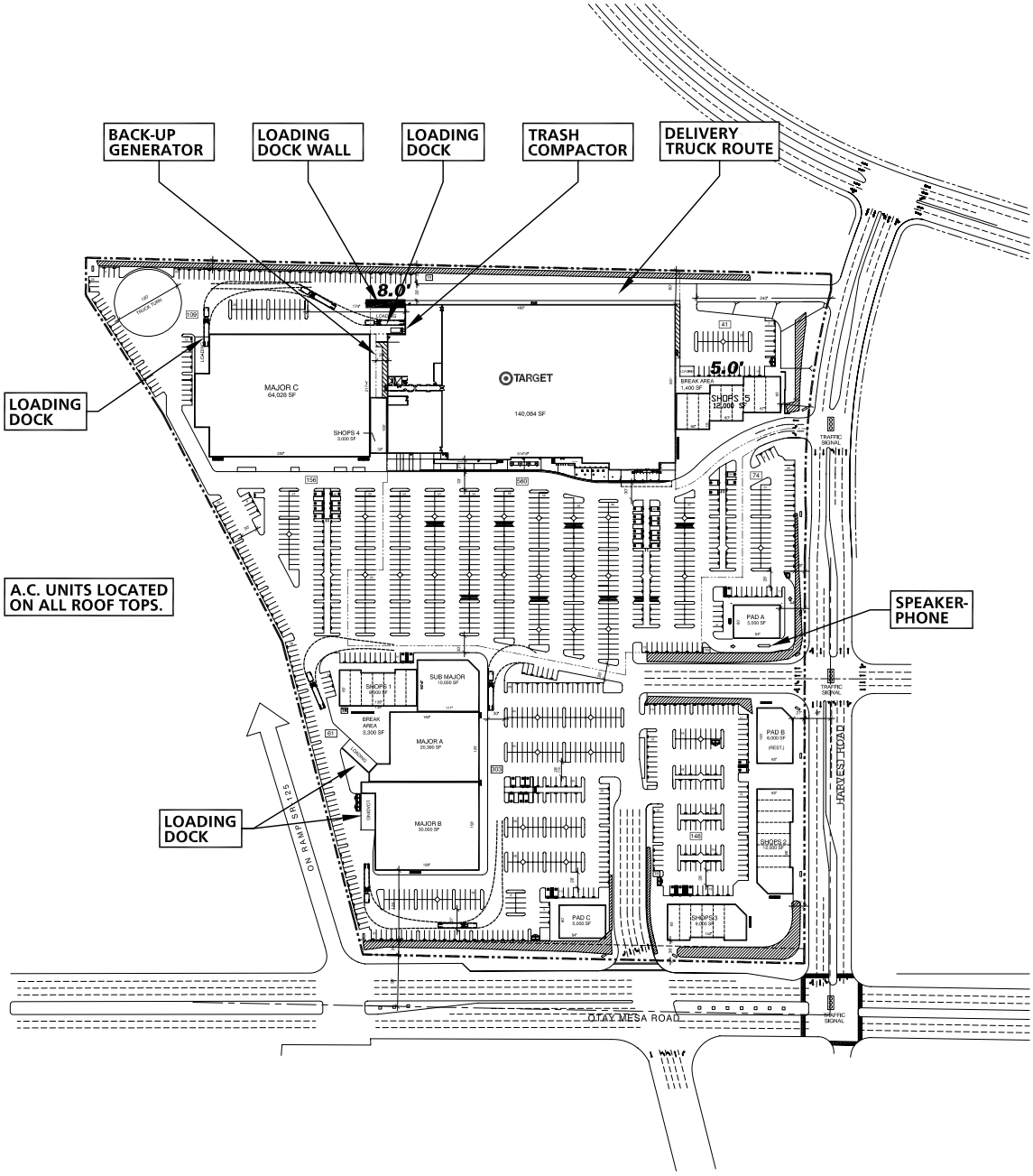
1.2 Project Noise Impact Analysis

The project is proposing a screening wall be located at the loading docks located behind the Target building on the northern portion of the site. Assuming a minimal height of 8.0 feet, as shown in Exhibit 1-A, the stationary noise sources from the loading docks, truck deliveries, trash compactor, and back-up generator on this portion of the project site are reduced below the County of San Diego property line noise standards for both the daytime and nighttime hours. The results of this analysis also shows that the proposed California Crossings Project will not produce noise levels above the respective daytime or nighttime operational noise level limits at any property line and therefore no mitigation is required.

1.3 Short-Term Construction Noise

Results of the analysis indicate that the project will meet the County of San Diego 75 dBA standard for grading activities at all project property lines.

SUMMARY OF RECOMMENDATIONS



LEGEND:

= LOADING DOCK WALL LOCATION

8.0' = WALL HEIGHT (IN FEET)

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1.4 Airport Noise Impacts

It was determined that the project is outside of the identified 60 dBA CNEL contour and would not be impacted by the airport. Noise from Brown Field would be less than significant due to the lack of sensitivity related to commercial uses and no significant impact would occur.

2.0 INTRODUCTION

The California Crossings Project is proposed to develop 325,502 square feet of retail commercial center on 28.50 net acres and is generally located north of Otay Mesa Road and west of Harvest Road in the County of San Diego as shown on Exhibit 2-A. The project site plan is shown on Exhibit 2-B.

Included in this report is a discussion of noise fundamentals, the County of San Diego noise standards, the existing ambient noise level measurement results, the off-site transportation related noise impacts, the stationary source noise impact analysis, and finally the short-term construction noise impacts. In addition, noise measures have been identified to control the potential noise impacts created by the project.

EXHIBIT 2-A

LOCATION MAP

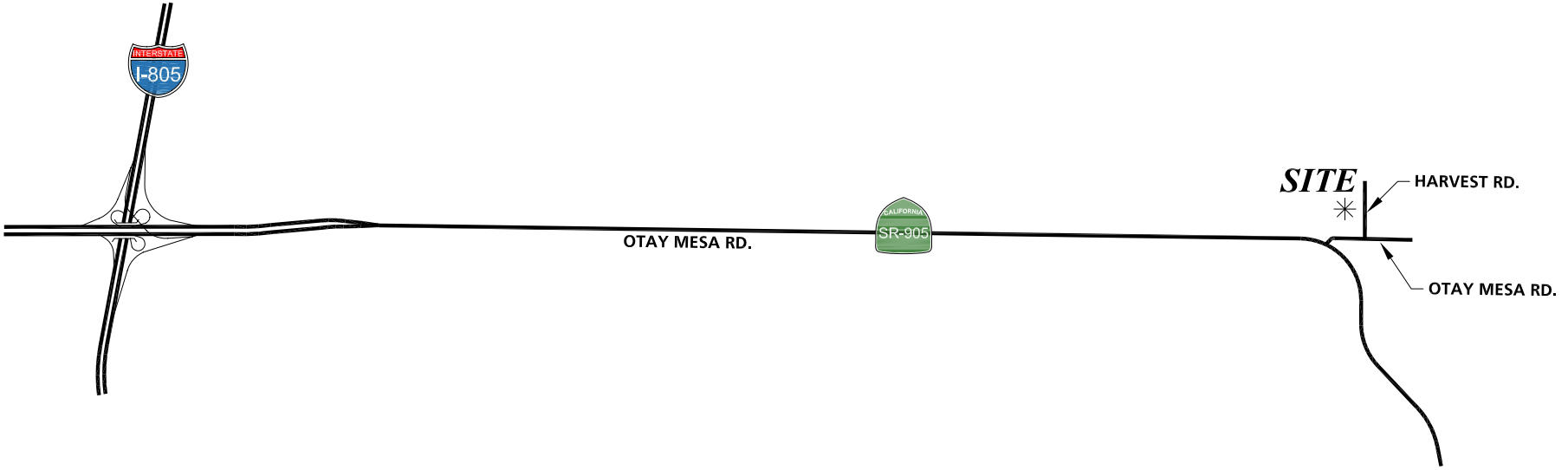

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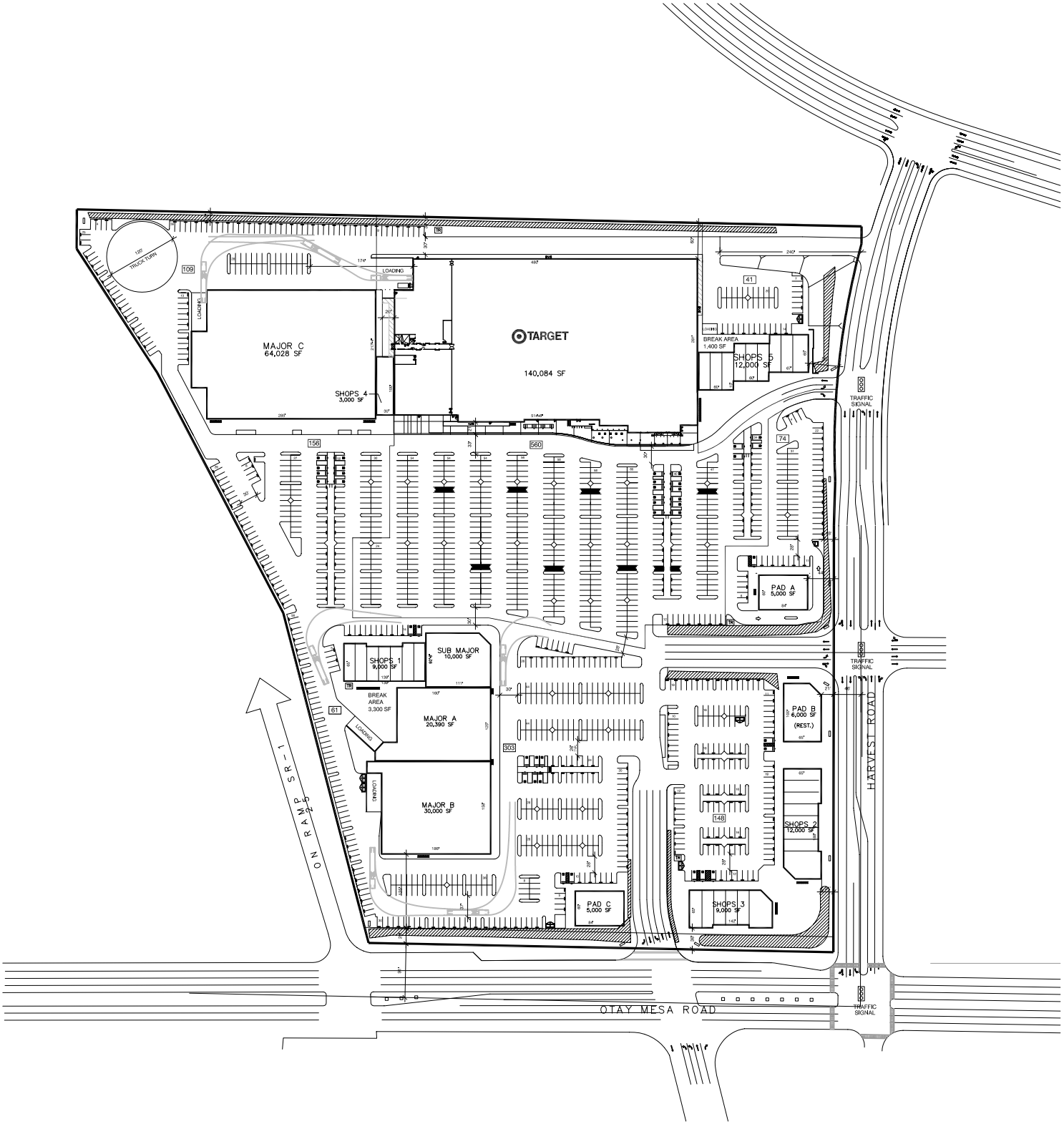
EXHIBIT 2-B

SITE PLAN



3.0 NOISE FUNDAMENTALS

Noise has been simply defined as "unwanted sound". Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear.

3.1 Noise Descriptors

Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The peak hour Leq is the noise metric used by Caltrans for all traffic noise impact analyses.

The Community Noise Equivalent Level (CNEL) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of 5 decibels to sound levels in the evening hours between 7 p.m. and 10 p.m. and the addition of 10 decibels to sound levels at night between 10 p.m. and 7 a.m. These additions are made to account for the noise sensitive time periods during night hours when sound appears louder. CNEL values do not represent the actual sound level heard at any particular time, but rather represents the total sound exposure. The County of San Diego relies on the CNEL noise standard to assess transportation related impacts on noise sensitive land uses.

3.2 Noise Control

Noise control is the process of obtaining an acceptable noise environment for a particular observation point or receiver by controlling the noise source,

transmission path, receiver or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to any and all of these three elements.

3.3 Drop-off Rate

Sound from a small localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source. The sound level attenuates or drops-off at a rate of 6 dBA for each doubling of distance. A drop-off rate of 6.0 dBA per doubling of distance was used for all fixed noise sources.

To account for the ground-effect attenuation (absorption) for moving sources, two types of site conditions are commonly used in traffic noise models, soft site and hard site conditions. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. A drop-off rate of 4.5 dBA per doubling of distance is typically observed over soft ground with landscaping, as compared with a 3.0 dBA drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. To predict the worse case future noise environment, hard site conditions were used in this analysis based on the topography in the site area.

3.4 Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by as much as 20 decibels. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the line of sight. A noise barrier can achieve a minimum 5 decibel noise level reduction when it is tall enough to break the line-of-sight.

The noise barrier attenuation values used in this analysis are based on the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108 (the "FHWA Model”). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL).

4.0 COUNTY OF SAN DIEGO NOISE STANDARDS

The County of San Diego addresses two separate types of noise sources through the CEQA process: (1) mobile, and (2) stationary. In the context of this noise analysis, the noise levels associated with the proposed California Crossings Project are regulated by the County of San Diego noise guidelines for determining significance and the Noise Ordinance. Those guidelines are summarized below and provided as Appendix "A".

4.1 Noise Element Criteria

Off-site project impacts describe the off-site transportation related noise associated with the development of the project. Noise level increases and impacts attributable to development of the proposed project are estimated by comparing the "with-project" traffic volume to the "without-project" traffic volume. The California Environmental Quality Act (CEQA) acknowledges that changes in noise levels greater than 3 dBA are often identified as "barely perceptible," while changes of 5 dBA are "readily perceptible." In the range of 1 dBA to 3 dBA, people who are very sensitive to noise may perceive a slight change in noise level.

In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dBA. However, in a community situation, the noise exposure is extended over a long time period, and changes in noise levels occur over years rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dBA, and 3 dBA appears appropriate for most people.

For purposes of this study, direct roadway noise impacts would be considered significant if the project increases noise levels for a noise sensitive land use by 3 dBA CNEL and if: (1) the existing noise levels already exceed the 60 dBA CNEL

County of San Diego noise sensitive land use standard or the 65 dBA CNEL City of San Diego standard, or (2) the project increases noise levels in the area adjacent to the roadway segment from below the 60 and 65 dBA CNEL standards to above 60 or 65 dBA CNEL depending if the area is in the County or City.

If cumulative noise levels are increased 3 dBA or more and above the standard for noise sensitive land uses, the County of San Diego requires that the "cumulative without project" and the "cumulative with project" scenarios are compared to determine if significant impacts occur. Project generated cumulative roadway noise impacts would be considered significant if the project is the major contributor to the noise level increased or raises the "cumulative without project" noise level by 1 dBA or greater.

4.2 Noise Ordinance Criteria

Section 36.404 of the County of San Diego noise ordinance provides performance standards and noise control guidelines for determining and mitigating non-transportation, or stationary, noise source impacts to residential properties. The purpose of the noise ordinance is to protect, create and maintain an environment free from noise and vibration that may jeopardize the health or welfare, or degrade the quality of life.

According to the stationary source exterior noise standards, no person shall operate any source of sound at any location within the County or allow the creation of any noise on a property which causes the noise levels to exceed the exterior noise limits at the property boundary within all non-industrial zones. The proposed project site is with in the East Otay Mesa Specific Plan which designates the project site and adjacent property to the north and east as Technology Business Park. The approved Noise Ordinance, Section 36.404(c), effective January 9, 2009 states that

operational noise levels limits for the proposed land uses zoned S88 are 60 dBA Leq for daytime hours and 55 dBA Leq nighttime hours.

Section 36.409 of the County of San Diego ordinance controls construction equipment noise. Except for emergency work, it shall be unlawful for any person, including the County of San Diego, to operate construction equipment at any construction site, except as outlined in subsections (a) and (b) below:

a. It shall be unlawful for any person to operate construction equipment between the hours of 7 p.m. of any day and 7 a.m. of the following day.

b. It shall be unlawful for any person to operate construction equipment on Sundays, and days appointed by the President, Governor, or the Board of Supervisors for a public fast, Thanksgiving, or holiday, but a person may operate construction equipment on the above-specified days between the hours of 10 a.m. and 5 p.m. at his residence or for the purpose of constructing a residence for himself, provided that the average sound level does not exceed 75 decibels during the period of operation and that the operation of construction equipment is not carried out for profit or livelihood.

c. It shall be unlawful to operate any construction equipment so as to cause at or beyond the property line of any property upon which a any occupied property is located an average sound level greater than 75 decibels between the hours of 7 a.m. and 7 p.m. For temporary activities, the County considers the 75 decibel (A) average to be based on a period of eight hours.

In 1991, the U.S. Fish and Wildlife Service (USFWS) recommended that noise levels not exceed 60 dBA to protect the Gnatcatcher and other bird species. The County of San Diego has adopted this standard for all sensitive species.

Therefore, the 60 dBA Leq will be used as the noise criteria to assess noise impacts on sensitive wildlife both on and off site.

5.0 EXISTING AMBIENT NOISE LEVEL MEASUREMENTS

To determine the existing noise level environment and to assess potential noise impacts on the adjacent residential areas, noise measurements were taken by Urban Crossroads, Inc. at one location along Otay Mesa Road in the project vicinity.

5.1 Measurement Procedure and Criteria

Noise measurements were taken using a Larson-Davis Model 824 Type 1 precision sound level meter, programmed, in "fast" mode, to record noise levels in "A" weighted form. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 150.

5.2 Noise Measurement Results

The results of the noise level measurements are presented in Table 5-1. The site was monitored for a minimum time period of 10 minutes. The measurement was located approximately five feet from the edge of roadway. Due to the close proximity of the roadway, the existing ambient noise level measured in the area of the project during the monitoring period was found to be as high 76.5 dBA Leq. The existing noise levels in the project area consisted primarily of vehicle traffic noise from Otay Mesa Road.

TABLE 5-1

EXISTING (AMBIENT) NOISE LEVEL MEASUREMENTS[1]

OBSERVER LOCATION[2]	DESCRIPTION	PRIMARY NOISE SOURCE	MEASURED NOISE LEVELS (dBA Leq)	MEASURED NOISE LEVELS (dBA CNEL)
1	Located approximately 5 feet from the edge of Otay Mesa Road	Vehicle noise from Otay Mesa Road	76.5	76.6

[1] Noise measurements taken for a minumum period of 10 minutes by Urban Crossroads Inc

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6.0 OFF-SITE NOISE ANALYSIS

The following section outlines the methods and procedures used to model and analyze the future off-site traffic noise environment.

6.1 FHWA Traffic Noise Prediction Model

The projected roadway noise impacts from vehicular traffic were projected using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108 (the "FHWA Model"). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

6.2 Traffic Noise Prediction Model Inputs

Tables 6-1 and 6-2 present the FHWA Traffic Noise Prediction Model roadway parameters used in this analysis. The cumulative conditions include the completion of Phases 1A & 1B along with SR-905 and all other roadway improvements and modifications. The roadway classifications were modified for this condition to reflect these changes. Hard site conditions were used to develop noise contours and analyze noise impacts for all receptors. Hard site conditions provide a worse-case analysis.

TABLE 6-1

EXISTING ROADWAY PARAMETERS[1]

ROADWAY	SEGMENT (Jurisdiction)[2]	EXISTING ROADWAY CLASSIFICATION[3]
Interim SR-905 (Otay Mesa Rd.)	Britannia Blvd. to La Media Rd. (Ci/Ca)	6-Lane Prime Arterial
Interim SR-905 (Otay Mesa Rd.)	La Media Rd. to Piper Ranch Rd. (Ci/Ca)	5-Lane Major Road
Interim SR-905 (Otay Mesa Rd.)	Piper Ranch Rd. to SR-125 (Co/Ci/Ca)	6-Lane Prime Arterial
Otay Mesa Road (Old Otay Mesa Rd.)	SR-125 to Interim SR-905 Connector (Co/Ci/Ca)	5-Lane Major Road
Otay Mesa Road (Old Otay Mesa Rd.)	Interim SR-905 Connector to Harvest Rd. (Co/Ci/Ca)	5-Lane Major Road
Otay Mesa Road (Old Otay Mesa Rd.)	Harvest Rd. to Sanyo Ave. (Co/Ci/Ca)	2-Lane Collector
Airway Road	Sanyo Ave. to Paseo de La Americas (Ci)	2-Lane Collector
Siempre Viva Road	SR-905 to Paseo de Las Americas (Ci)	6-Lane Prime Arterial
La Media Road	Interim SR-905 (Otay Mesa Rd.) to Airway Rd. (Ci)	2-Lane Collector
SR-125	North of Otay Mesa Rd. (SBX)	4-Lane Freeway
Existing SR-905	Otay Mesa Rd. to Siempre Viva Rd. (Ci/Ca)	4-Lane Major Road
Existing SR-905	South of Siempre Viva Rd. (Ci/Ca)	4-Lane Freeway
Harvest Road	North of Otay Mesa Rd. (Co)	2-Lane Collector
Sanyo Avenue	Otay Mesa Rd. to Airway Rd. (Ci)	4-Lane Collector
Paseo De Las Americas	Airway Rd. to Siempre Viva Rd. (Ci)	4-Lane Collector

1 Off-site analysis utilzed hard-site conditions for all observers.

2 Ci=City, Co=County, SBX=South Bay Expressway, Ca=Caltrans

3 According to the Traffic Impact Study prepared by Darnell & Associates dated June 30, 2009.

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TABLE 6-2

FUTURE WITH SR-905 ROADWAY PARAMETERS[1]

ROADWAY	SEGMENT (Jurisdiction)[2]	ROADWAY CLASSIFICATION[3]
Interim SR-905 (Otay Mesa Rd.)	Britannia Blvd. to La Media Rd. (Ci)	6-Lane Prime Arterial
Interim SR-905 (Otay Mesa Rd.)	La Media Rd. to Piper Ranch Rd. (Ci)	5-Lane Major Road
Interim SR-905 (Otay Mesa Rd.)	Piper Ranch Rd. to SR-125 (Co/Ci)	6-Lane Prime Arterial
Otay Mesa Road (Old Otay Mesa Rd.)	SR-125 to Interim SR-905 Connector (Co/Ci)	5-Lane Major Road
Otay Mesa Road (Old Otay Mesa Rd.)	Interim SR-905 Connector to Harvest Rd. (Co/Ci)	5-Lane Major Road
Otay Mesa Road (Old Otay Mesa Rd.)	Harvest Rd. to Sanyo Ave. (Co/Ci)	2-Lane Collector
Airway Road	Sanyo Ave. to Paseo de La Americas (Ci)	4-Lane Major Road
Siempre Viva Road	SR-905 to Paseo de Las Americas (Ci)	6-Lane Prime Arterial
La Media Road	Otay Mesa Rd. to SR-905 (Ci)	2-Lane Collector
La Media Road	SR-905 to Airway Rd. (Ci)	2-Lane Collector
SR-125	North of Otay Mesa Rd. (SBX)	4-Lane Freeway
New SR-905	La Media Rd. to Siempre Viva Rd. (Ca)	6-Lane Freeway
Existing SR-905	South of Siempre Viva Rd. (Ci/Ca)	4-Lane Freeway
Harvest Road	North of Otay Mesa Rd. (Co)	2-Lane Collector
Sanyo Avenue	Otay Mesa Rd. to Airway Rd. (Ci)	4-Lane Collector
Paseo De Las Americas	Airway Rd. to Siempre Viva Rd. (Ci)	4-Lane Collector

1 Off-site analysis utilzed hard-site conditions for all observers.

2 Ci=City, Co=County, SBX=South Bay Expressway, Ca=Caltrans

3 According to the Traffic Impact Study prepared by Darnell & Associates dated June 30, 2009.

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Table 6-3 presents the hourly traffic flow distributions (vehicle mix) used for this analysis. The future traffic noise model utilizes a vehicle mix of 72% Autos, 16% Medium Trucks and 12% Heavy Trucks for all analyzed roadway segments. This worse-case vehicle mix was taken from a previously accepted report completed for Spring Canyon Ranch. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks and heavy trucks for input into the FHWA Model.

6.3 Traffic Noise Contours

To assess the off-site noise level impacts associated with development of the proposed California Crossings Project noise contours were developed for the following traffic scenarios:

Existing: This scenario refers to the existing present-day noise conditions, without construction of the proposed project.

Existing with project: This scenario refers to the existing present-day noise conditions, with construction of the proposed project. This corresponds to the completion of the project's buildout.

Cumulative with SR-905 plus Project: This scenario refers to the existing condition which would exist once all phases of the SR-905 facilities are constructed and operational with the proposed project. This is anticipated to occur in year 2015. This corresponds to the completion of the project's buildout plus a "buffer" to include additional future cumulative developments.

Noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway. CNEL noise contours are determined

TABLE 6-3

SEGMENT ANALYSIS HOURLY TRAFFIC FLOW DISTRIBUTION

MOTOR-VEHICLE TYPE	DAYTIME (7 AM TO 7 PM)	EVENING (7 PM TO 10 PM)	NIGHT (10 PM TO 7 AM)	TOTAL % TRAFFIC FLOW
Automobiles	80.0%	7.0%	13.0%	72.00%
Medium Trucks	80.0%	7.0%	13.0%	16.00%
Heavy Trucks	80.0%	7.0%	13.0%	12.00%

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below for the 55, 60, 65 and 70 dBA noise levels for first floor receptors. The noise contours calculations are included in Appendix "B".

The average daily traffic volumes used for the off-site analysis in this study are presented in Tables 6-4 through 6-7. The traffic volumes were obtained from the Traffic Impact Analysis prepared by Darnell & Associates dated April 2010. The distance from the centerline of the roadway to the first floor CNEL contours for roadways in the proposed project's vicinity are also presented in Tables 6-4 through 6-7. The noise contours do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels.

6.4 Project Traffic Noise Level Contributions

Table 6-8 presents the comparison of the Existing Year with and without project noise levels for first floor receptors. The roadway noise impacts will increase from 0.1 dBA CNEL to 5.3 dBA CNEL with the development of the proposed project.

Table 6-9 presents a comparison of the Existing Year to Cumulative Year with project and SR-905 noise levels. The roadway noise levels will increase from -4.3 dBA CNEL to 7.8 dBA CNEL with the development of the proposed project and the addition of the proposed cumulative projects.

Table 6-10 presents a comparison of the Cumulative Year with and without project noise levels for all roadway segments. This was to determine the project related contributions in the Cumulative Year. Based on the criteria presented in Section 4, there are cumulative impacts of more than 1.0 dBA CNEL on some segments.

TABLE 6-4

EXISTING CONDITIONS NOISE CONTOURS

ROAD	SEGMENT	AVERAGE DAILY TRAFFIC[1]	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Interim SR-905 (Otay Mesa Rd.)	Britannia Blvd. to La Media Rd.	59.0	81.3	1,494	4,724	14,939	47,241
Interim SR-905 (Otay Mesa Rd.)	La Media Rd. to Piper Ranch Rd.	44.5	79.3	939	2,970	9,393	29,704
Interim SR-905 (Otay Mesa Rd.)	Piper Ranch Rd. to SR-125	43.1	80.0	1,092	3,452	10,915	34,518
Otay Mesa Road (Old Otay Mesa Rd.)	SR-125 to Interim SR-905 Connector	16.7	75.1	352	1,113	3,520	11,132
Otay Mesa Road (Old Otay Mesa Rd.)	Interim SR-905 Connector to Harvest Rd.	9.7	72.7	205	650	2,054	6,497
Otay Mesa Road (Old Otay Mesa Rd.)	Harvest Rd. to Sanyo Ave.	8.2	69.8	106	334	1,057	3,343
Airway Road	Sanyo Ave. to Paseo de La Americas	5.6	68.2	73	230	726	2,296
Siempre Viva Road	SR-905 to Paseo de Las Americas	26.7	77.9	675	2,134	6,749	21,341
La Media Road	Interim SR-905 (Otay Mesa Rd.) to Airway Rd.	15.2	72.5	196	619	1,957	6,189
SR-125	North of Otay Mesa Rd.	30.0	78.2	728	2,301	7,277	23,012
Existing SR-905	Otay Mesa Rd. to Siempre Viva Rd.	37.8	78.5	778	2,461	7,783	24,612
Existing SR-905	South of Siempre Viva Rd.	28.0	77.9	679	2,148	6,792	21,478
Harvest Road	North of Otay Mesa Rd.	DNE	-	-	-	-	-
Sanyo Avenue	Otay Mesa Rd. to Airway Rd.	2.7	66.0	44	138	436	1,379
Paseo De Las Americas	Airway Rd. to Siempre Viva Rd.	5.3	69.0	87	274	867	2,740

1. Volume (In thousands) according to the Traffic Impact Study prepared by Darnell & Associates dated June 30, 2009.

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TABLE 6-5

EXISTING PLUS PROJECT CONDITIONS NOISE CONTOURS

ROAD	SEGMENT	AVERAGE DAILY TRAFFIC[1]	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Interim SR-905 (Otay Mesa Rd.)	Britannia Blvd. to La Media Rd.	60.3	81.4	1,526	4,826	15,262	48,263
Interim SR-905 (Otay Mesa Rd.)	La Media Rd. to Piper Ranch Rd.	46.4	79.5	978	3,093	9,780	30,928
Interim SR-905 (Otay Mesa Rd.)	Piper Ranch Rd. to SR-125	45.1	80.2	1,142	3,611	11,420	36,114
Otay Mesa Road (Old Otay Mesa Rd.)	SR-125 to Interim SR-905 Connector	24.1	76.6	508	1,607	5,083	16,073
Otay Mesa Road (Old Otay Mesa Rd.)	Interim SR-905 Connector to Harvest Rd.	23.4	76.5	494	1,562	4,939	15,618
Otay Mesa Road (Old Otay Mesa Rd.)	Harvest Rd. to Sanyo Ave.	14.6	72.3	188	594	1,877	5,937
Airway Road	Sanyo Ave. to Paseo de La Americas	12.0	71.5	155	489	1,546	4,890
Siempre Viva Road	SR-905 to Paseo de Las Americas	33.0	78.8	836	2,645	8,364	26,450
La Media Road	Interim SR-905 (Otay Mesa Rd.) to Airway Rd.	15.8	72.7	203	642	2,029	6,416
SR-125	North of Otay Mesa Rd.	33.2	78.6	805	2,546	8,051	25,459
Existing SR-905	Otay Mesa Rd. to Siempre Viva Rd.	42.2	79.0	869	2,747	8,686	27,466
Existing SR-905	South of Siempre Viva Rd.	39.2	79.4	950	3,004	9,500	30,042
Harvest Road	North of Otay Mesa Rd.	20.5	73.8	264	834	2,636	8,337
Sanyo Avenue	Otay Mesa Rd. to Airway Rd.	9.0	71.3	148	468	1,479	4,677
Paseo De Las Americas	Airway Rd. to Siempre Viva Rd.	11.7	72.4	191	604	1,910	6,039

1. Volume (In thousands) according to the Traffic Impact Study prepared by Darnell & Associates dated June 30, 2009.

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TABLE 6-6

EXISTING PLUS CUMULATIVE WITH SR-905 CONDITIONS NOISE CONTOURS

ROAD	SEGMENT	AVERAGE DAILY TRAFFIC[1]	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Interim SR-905 (Otay Mesa Rd.)	Britannia Blvd. to La Media Rd.	21.6	77.0	547	1,729	5,467	17,288
Interim SR-905 (Otay Mesa Rd.)	La Media Rd. to Piper Ranch Rd.	23.4	76.5	493	1,560	4,934	15,602
Interim SR-905 (Otay Mesa Rd.)	Piper Ranch Rd. to SR-125	19.4	76.5	491	1,551	4,906	15,515
Otay Mesa Road (Old Otay Mesa Rd.)	SR-125 to Interim SR-905 Connector	16.8	75.1	354	1,120	3,540	11,196
Otay Mesa Road (Old Otay Mesa Rd.)	Interim SR-905 Connector to Harvest Rd.	15.7	74.8	331	1,046	3,309	10,463
Otay Mesa Road (Old Otay Mesa Rd.)	Harvest Rd. to Sanyo Ave.	8.5	70.0	109	345	1,091	3,449
Airway Road	Sanyo Ave. to Paseo de La Americas	11.6	73.4	240	758	2,396	7,577
Siempre Viva Road	SR-905 to Paseo de Las Americas	49.2	80.5	1,247	3,943	12,468	39,426
La Media Road	Otay Mesa Rd. to SR-905	20.5	73.8	263	832	2,632	8,323
La Media Road	SR-905 to Airway Rd.	16.9	73.0	217	687	2,174	6,874
SR-125	North of Otay Mesa Rd.	10.3	73.6	250	790	2,498	7,901
Existing SR-905	Otay Mesa Rd. to Siempre Viva Rd.	83.4	82.8	2,111	6,676	21,113	66,764
Existing SR-905	South of Siempre Viva Rd.	65.0	81.6	1,576	4,983	15,758	49,833
Harvest Road	North of Otay Mesa Rd.	7.3	69.3	94	296	938	2,965
Sanyo Avenue	Otay Mesa Rd. to Airway Rd.	11.8	72.5	193	612	1,935	6,119
Paseo De Las Americas	Airway Rd. to Siempre Viva Rd.	16.3	73.8	266	840	2,658	8,404

1. Volume (In thousands) according to the Traffic Impact Study prepared by Darnell & Associates dated June 30, 2009.

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TABLE 6-7

EXISTING PLUS CUMULATIVE PLUS PROJECT WITH SR-905 CONDITIONS NOISE CONTOURS

ROAD	SEGMENT	AVERAGE DAILY TRAFFIC[1]	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Interim SR-905 (Otay Mesa Rd.)	Britannia Blvd. to La Media Rd.	22.1	77.1	559	1,767	5,588	17,672
Interim SR-905 (Otay Mesa Rd.)	La Media Rd. to Piper Ranch Rd.	31.6	77.8	667	2,108	6,667	21,083
Interim SR-905 (Otay Mesa Rd.)	Piper Ranch Rd. to SR-125	27.8	78.1	703	2,222	7,026	22,220
Otay Mesa Road (Old Otay Mesa Rd.)	SR-125 to Interim SR-905 Connector	33.3	78.1	703	2,222	7,026	22,217
Otay Mesa Road (Old Otay Mesa Rd.)	Interim SR-905 Connector to Harvest Rd.	33.3	78.1	703	2,224	7,034	22,243
Otay Mesa Road (Old Otay Mesa Rd.)	Harvest Rd. to Sanyo Ave.	12.9	71.8	165	523	1,654	5,232
Airway Road	Sanyo Ave. to Paseo de La Americas	16.0	74.8	330	1,043	3,299	10,431
Siempre Viva Road	SR-905 to Paseo de Las Americas	53.6	80.9	1,358	4,294	13,578	42,938
La Media Road	Otay Mesa Rd. to SR-905	28.2	75.2	363	1,147	3,626	11,468
La Media Road	SR-905 to Airway Rd.	17.1	73.0	219	694	2,194	6,939
SR-125	North of Otay Mesa Rd.	13.5	74.7	327	1,035	3,272	10,348
Existing SR-905	Otay Mesa Rd. to Siempre Viva Rd.	90.2	83.2	2,283	7,219	22,829	72,192
Existing SR-905	South of Siempre Viva Rd.	76.1	82.2	1,847	5,840	18,467	58,397
Harvest Road	North of Otay Mesa Rd.	26.7	74.9	343	1,084	3,427	10,838
Sanyo Avenue	Otay Mesa Rd. to Airway Rd.	16.2	73.8	265	839	2,652	8,387
Paseo De Las Americas	Airway Rd. to Siempre Viva Rd.	20.6	74.9	337	1,067	3,375	10,672

1. Volume (In thousands) according to the Traffic Impact Study prepared by Darnell & Associates dated June 30, 2009.

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TABLE 6-8

EXISTING VERSUS EXISTING + PROJECT YEAR PROJECT CONTRIBUTIONS

ROAD	SEGMENT	DISTANCE TO 60 dBA CNEL CONTOUR (FEET)			CNEL AT 100 FEET (dBA)		
		E	E + P	PROJECT INCREASE	E	E + P	PROJECT INCREASE
Interim SR-905 (Otay Mesa Rd.)	Britannia Blvd. to La Media Rd.	14,939	15,262	323	81.3	81.4	0.1
Interim SR-905 (Otay Mesa Rd.)	La Media Rd. to Piper Ranch Rd.	9,393	9,780	387	79.3	79.5	0.2
Interim SR-905 (Otay Mesa Rd.)	Piper Ranch Rd. to SR-125	10,915	11,420	505	80.0	80.2	0.2
Otay Mesa Road (Old Otay Mesa Rd.)	SR-125 to Interim SR-905 Connector	3,520	5,083	1,563	75.1	76.6	1.6
Otay Mesa Road (Old Otay Mesa Rd.)	Interim SR-905 Connector to Harvest Rd.	2,054	4,939	2,885	72.7	76.5	**3.8**
Otay Mesa Road (Old Otay Mesa Rd.)[1]	Harvest Rd. to Sanyo Ave.	1,057	1,877	820	69.8	72.3	2.5
Airway Road	Sanyo Ave. to Paseo de La Americas	726	1,546	820	68.2	71.5	**3.3**
Siempre Viva Road	SR-905 to Paseo de Las Americas	6,749	8,364	1,615	77.9	78.8	0.9
La Media Road	Interim SR-905 (Otay Mesa Rd.) to Airway Rd.	1,957	2,029	72	72.5	72.7	0.2
SR-125	North of Otay Mesa Rd.	7,277	8,051	774	78.2	78.6	0.4
Existing SR-905	Otay Mesa Rd. to Siempre Viva Rd.	7,783	8,686	903	78.5	79.0	0.5
Existing SR-905	South of Siempre Viva Rd.	6,792	9,500	2,708	77.9	79.4	1.5
Harvest Road	North of Otay Mesa Rd.	DNE	2,636	-	DNE	73.8	-
Sanyo Avenue	Otay Mesa Rd. to Airway Rd.	436	1,479	1,043	66.0	71.3	**5.3**
Paseo De Las Americas	Airway Rd. to Siempre Viva Rd.	867	1,910	1,043	69.0	72.4	**3.4**

[1] Only Roadway Segment with existing (and proposed) Sensitive Land Uses.

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TABLE 6-9

EXISTING VERSUS EXISTING +CUMULATIVE + PROJECT WITH SR-905 YEAR PROJECT CONTRIBUTIONS

ROAD	SEGMENT	DISTANCE TO 60 dBA CNEL CONTOUR (FEET)			CNEL AT 100 FEET (dBA)		
		EX	EX + C + P	CUMULATIVE CONSIDERABLE IMPACTS	EX	EX + C + P	CUMULATIVE CONSIDERABLE IMPACTS
Interim SR-905 (Otay Mesa Rd.)	Britannia Blvd. to La Media Rd.	14,939	5,588	-9,351	81.3	77.1	-4.3
Interim SR-905 (Otay Mesa Rd.)	La Media Rd. to Piper Ranch Rd.	9,393	6,667	-2,726	79.3	77.8	-1.5
Interim SR-905 (Otay Mesa Rd.)	Piper Ranch Rd. to SR-125	10,915	7,026	-3,889	80.0	78.1	-1.9
Otay Mesa Road (Old Otay Mesa Rd.)	SR-125 to Interim SR-905 Connector	3,520	7,026	3,506	75.1	78.1	**3.0**
Otay Mesa Road (Old Otay Mesa Rd.)	Interim SR-905 Connector to Harvest Rd.	2,054	7,034	4,980	72.7	78.1	**5.3**
Otay Mesa Road (Old Otay Mesa Rd.)[1]	Harvest Rd. to Sanyo Ave.	1,057	1,654	597	69.8	71.8	1.9
Airway Road	Sanyo Ave. to Paseo de La Americas	726	3,299	2,573	68.2	74.8	**6.6**
Siempre Viva Road	SR-905 to Paseo de Las Americas	6,749	13,578	6,829	77.9	80.9	**3.0**
La Media Road	Otay Mesa Rd. to SR-905	1,957	3,626	1,669	72.5	75.2	2.7
La Media Road	SR-905 to Airway Rd.	1,957	2,194	237	72.5	73.0	0.5
SR-125	North of Otay Mesa Rd.	7,277	3,272	-4,005	78.2	74.7	-3.5
Existing SR-905	Otay Mesa Rd. to Siempre Viva Rd.	7,783	22,829	15,046	78.5	83.2	**4.7**
Existing SR-905	South of Siempre Viva Rd.	6,792	18,467	11,675	77.9	82.2	**4.3**
Harvest Road	North of Otay Mesa Rd.	DNE	3,427	-	DNE	74.9	-
Sanyo Avenue	Otay Mesa Rd. to Airway Rd.	436	2,652	2,216	66.0	73.8	**7.8**
Paseo De Las Americas	Airway Rd. to Siempre Viva Rd.	867	3,375	2,508	69.0	74.9	**5.9**

[1] Only Roadway Segment with existing (and proposed) Sensitive Land Uses.

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TABLE 6-10

EXISTING + CUMULATIVE VERSUS EXISTING +CUMULATIVE + PROJECT WITH SR-905 YEAR PROJECT CONTRIBUTIONS

ROAD	SEGMENT	DISTANCE TO 60 dBA CNEL CONTOUR (FEET)			CNEL AT 100 FEET (dBA)		
		EX + C	EX + C + P	CUMULATIVE SIGNIFICANT IMPACTS	EX + C	EX + C + P	CUMULATIVE SIGNIFICANT IMPACTS
Otay Mesa Road (Old Otay Mesa Rd.)	SR-125 to Interim SR-905 Connector	3,540	7,026	3,486	75.1	78.1	**3.0**
Otay Mesa Road (Old Otay Mesa Rd.)	Interim SR-905 Connector to Harvest Rd.	3,309	7,034	3,725	74.8	78.1	**3.3**
Otay Mesa Road (Old Otay Mesa Rd.)[1]	Harvest Rd. to Sanyo Ave.	1,091	1,654	563	70.0	71.8	**1.8**
Airway Road	Sanyo Ave. to Paseo de La Americas	2,396	3,299	903	73.4	74.8	**1.4**
Siempre Viva Road	SR-905 to Paseo de Las Americas	12,468	13,578	1,110	80.5	80.9	0.4
Existing SR-905	Otay Mesa Rd. to Siempre Viva Rd.	21,113	22,829	1,716	82.8	83.2	0.3
Existing SR-905	South of Siempre Viva Rd.	15,758	18,467	2,709	81.6	82.2	0.7
Sanyo Avenue	Otay Mesa Rd. to Airway Rd.	1,935	2,652	717	72.5	73.8	**1.4**
Paseo De Las Americas	Airway Rd. to Siempre Viva Rd.	2,658	3,375	717	73.8	74.9	**1.0**

[1] Only Roadway Segment with existing (and proposed) Sensitive Land Uses.

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6.5 Off-Site Transportation Related Project Noise Impact Analysis

Section 4 discussed the significance criteria. Direct roadway noise impacts would be considered significant if the project increases noise levels for a noise sensitive land use by 3 dBA CNEL and if: (1) the existing noise levels already exceed the 60 dBA CNEL County of San Diego noise sensitive land use standard or the 65 dBA CNEL City of San Diego standard, or (2) the project increases noise levels in the area adjacent to the roadway segment from below the 60 and 65 dBA CNEL standards to above 60 or 65 dBA CNEL depending if the area is in the City or County.

If cumulative noise levels are increased 3 dBA or more and above the standard for noise sensitive land uses, the County of San Diego requires that the "cumulative without project" and the "cumulative with project" scenarios are compared to determine if significant impacts occur. Project generated cumulative roadway noise impacts would be considered significant if the project is the major contributor to the noise level increased or raises the "cumulative without project" noise level by 1 dBA or greater.

The project does create an impact of more than 3.0 dBA CNEL on one segment of Otay Mesa Road, Airway Road, Sanyo Avenue and Paseo De Las Americas. No noise sensitive land uses exist or are proposed along these segments therefore the project's direct noise contributions to off-site roadway segments will not cause any significant impacts. The only roadway segment with existing or proposed noise sensitive land uses is along Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive. Three homes exist along this segment of Otay Mesa Road. As can be seen in Table 6-8, the project will directly contribute 2.5 dBA CNEL, which is below the 3 dBA CNEL threshold of significations.

There are cumulative impacts of more than 3.0 dBA CNEL on two segments of Otay Mesa Road, two segments of SR-905, one segment of Airway Road, Siempre Viva Road, Sanyo Avenue and Paseo De Las Americas, please refer to Table 6-9. The project will contribute more than a 1 dBA CNEL cumulative increase along the two segments of Otay Mesa Road, one segment of Airway Road, Sanyo Avenue and Paseo De Las Americas. The project related near-term increase can be seen Table 6-10. No sensitive land uses exist or are proposed along these roadway segments and therefore no impacts will occur.

As stated above, the only roadway segment with existing or proposed noise sensitive land uses is along Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive. Three homes exist along this segment of Otay Mesa Road. However with the construction of SR-905, traffic will be diverted and the traffic volumes and subsequent noise levels will be lower in the near term cumulative conditions. As can be seen in Table 6-9, the overall cumulative noise level increase is only 1.9 dBA and the project related cumulative increase shown in Table 6-10, only for clarification, is 0.8 dBA CNEL. Therefore, the proposed project's contributions to off-site roadway noise increases will not cause any significant impacts to any existing or future noise sensitive land uses.

7.0 PROJECT NOISE IMPACT ANALYSIS

This section examines the potential stationary noise source impacts associated with the development and operation of the proposed California Crossings Project. The commercial buildings along the perimeter of the project site and their perspective daily operations will be the main source of noise to adjacent properties. The existing adjacent lots along the northern property line are located nearest the proposed operational noise sources and have the most potential for impacts. The northern lots are also located approximately 8 feet above the pad elevation of the proposed commercial buildings. This difference was utilized in the model to provide the most accurate analysis. The project site also shows that a screening wall is proposed between the loading docks behind the Target building and the northern property line. The western, eastern and southern property lines are located across SR-125, Otay Mesa Road and Harvest Road, respectively. This increased distance separation from the proposed operational noise sources and the nearest property line lessens the potential for impacts. This section of the report will analyze noise impacts to all property lines from each relevant source.

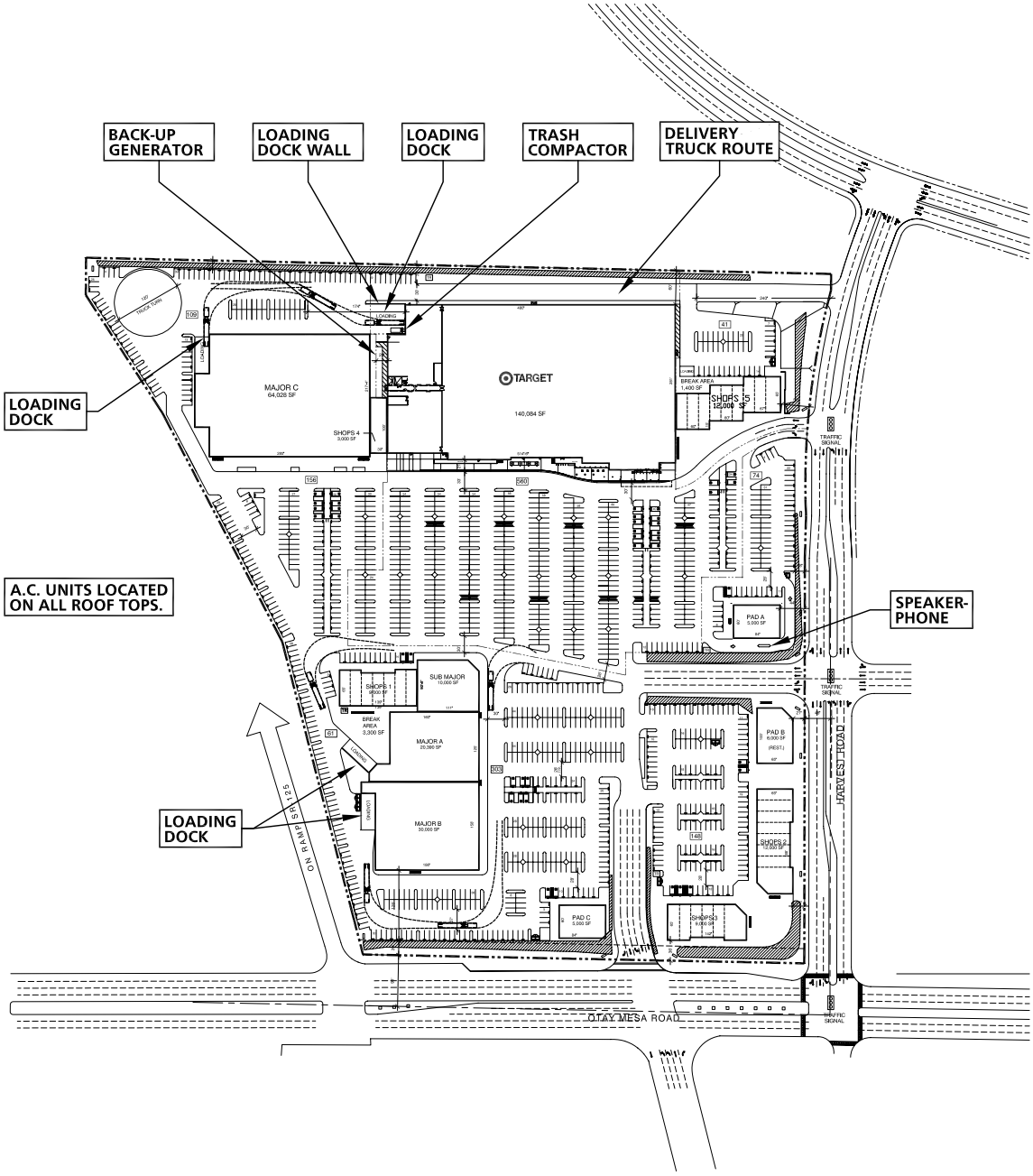
7.1 Project Related Stationary Source Noise

A review of the proposed project indicates that noise sources such as delivery trucks, trash compactors, truck loading/unloading, back-up generator, drive thru speakerphone and the mechanical ventilation system (air conditioning) are the primary sources of stationary noise. The locations of these noise sources is shown on Exhibit 7-A along with the proposed screening wall on the northern portion of the site.

7.2 Reference Noise Level Impacts

This section provides a detailed description of the reference point source noise level measurements and results as shown in Table 7-1. Point source noise levels

STATIONARY NOISE SOURCE LOCATIONS



LEGEND:

SCALE: 1" = 200'

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TABLE 7-1

REFERENCE NOISE LEVELS

NOISE SOURCE	DISTANCE FROM NOISE SOURCE (FEET)	NOISE SOURCE HEIGHT (FEET)	DROP-OFF RATE (Leq dBA)	NOISE LEVELS (Leq dBA)
Delivery Trucks[1]	25	8.0	6.0	66.5
Truck Loading[2]	40	8.0	6.0	45.5
Trash Compactor[3]	100	5.0	6.0	50.0
A/C - RTU-1[3]	15	5.0	6.0	58.0
Back-up Generator[2]	100	5.0	6.0	61.0
Speakerphones[4]	3	3.0	6.0	84.0

[1] As measured by Urban Crossroads, Inc. on 5/1/01.

[2] As measure by Urban Crossroads, Inc. on 5/2/01.

[3] Based on Target Develop Guide, Edition 2.7

[4] Data provided by HM Electronics Inc. for a typical HME SPP2 speaker post.

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increase or decrease rapidly at a rate of 6 dBA per halving or double of distance. It is important to note that the following projected noise levels assume the worst-case noise environment with the delivery trucks, trash compactors, speakerphone and roof-top mounted mechanical ventilation all occurring at the same time. In reality, these noise levels will vary throughout the day. The mechanical ventilation and speakerphone may operate during nighttime hours and the delivery trucks may arrive during nighttime hours. The daytime standard of 60 dBA and a nighttime standard of 55 dBA will be utilized in this analysis.

7.2.1 Delivery Trucks

In order to evaluate the California Crossings Project potential noise impacts, the analysis utilized reference noise level measurements taken at an Albertson's Shopping Center in Ladera Ranch, California on May 1, 2001 and May 2, 2001. The measurements include truck drive-by noise, truck loading/unloading and truck engine noise. While other smaller trucks will contribute to the noise environment, the reference tractor trailer truck noise measurements represent the "worst-case" noise impact. The unmitigated exterior noise levels for truck drive-by noise and truck engine noise were measured at 66.5 dBA Leq at a distance of 25 feet from the loading dock. The unmitigated exterior noise levels for loading and unloading of truck trailers were measured at 45.5 dBA Leq at a distance of 40 feet from the loading dock.

The project plans a total of 30 delivery trucks per day for all uses on the project site as shown on the chart in Appendix "C". During the daytime hours of 7 AM to 10 PM, a total of 28 trucks may deliver. A truck will take approximately 5 minutes to drive in the site and position itself into a bay, 20 minutes to be unloaded or loaded, and another 5 minutes to exit the bay secure doors, complete necessary paperwork and drive out of the site. This

equates to 30 minutes minimum it would take for one truck to complete a delivery or pickup, therefore two trucks at most could deliver to each bay in one hour. This is very unlikely to occur but would be considered a worst case scenario for this project. Since there are 5 bays on the project site, a total of 10 trucks per hour may arrive on the project site. Therefore, a total of 10 delivery trucks per hour will be utilized during daytime hours. According to the aforementioned chart, a total of 2 trucks will deliver during the nighttime hours of 10 PM to 7AM.

7.2.2 Trash Compactors

To assess the potential trash compactor noise level impacts, reference noise levels were provided by the Target Developer Guide, Edition 2.7. The guide indicates that the compactors used for all Target prototypes produces a noise level of less than 50 dBA at 100 feet from the source. The trash compactor noise level represents the worst-case noise impact with the trash compactor in continuous operation. In practice the trash compactor will operate on a limited basis throughout the day. The nearest property line is located approximately 117 feet from the trash compactor. This will reduce the noise level to 48.6 dBA Leq at the nearest property line with no mitigation or shielding.

7.2.3 Air Conditioning Units

Rooftop mechanical ventilation units will be installed on each proposed commercial building. To assess the mechanical ventilation system noise impacts, typical outdoor sound power levels were provided by the Target Developer Guide, Edition 2.7. The noise ratings provided by the guide

indicated that rooftop mechanical units for Target will produce an unmitigated noise levels 58 dBA when measured at a distance of 15 feet.

To predict the worst-case future noise environment, a continuous reference noise level of 58 dBA at 15 feet was used to represent the roof-top mechanical ventilation system. Even though the mechanical ventilation system will cycle on and off throughout the day, this approach presents the worst-case noise condition. In addition, these units have been designed to provide cooling during the peak summer daytime periods, and it is unlikely that all the units will be operating continuously throughout the noise sensitive nighttime periods. The distance from these units to the nearest property lines will vary from 130-feet to over 400-feet. The noise levels associated with the rooftop mechanical ventilation units will meet the standards at the nearest property line without mitigation.

7.2.4 Back-up Generator

To assess the potential back-up generator noise level impacts, reference noise levels were provided by the Target Developer Guide, Edition 2.7. The guide indicates that the back-up generators used for all Target prototypes produce a noise level of 61 dBA at 100 feet from the source. The generator noise level represents the worst-case noise impact with the generator in continuous operation. In practice the generator will operate on an as needed basis only or during routine maintenance. The shielding provided from the proposed minimum 8-foot high loading dock screening wall will reduced the noise levels to 48.7 dBA Leq and no mitigation is required.

7.2.5 Speakerphones

For the purpose of this analysis, the anticipated speakerphone noise impacts are based on data provided by HM Electronics, Inc. According to the manufacturer data provided, the speakerphone noise level is 84.0 dBA Leq

at 1 foot away. The distance to the nearest property line is across Harvest Road 200-feet from this source. This will reduce the noise level to 47.5 dBA Leq and no mitigation is required.

7.3 Project Only Stationary Source Noise Impacts

Based upon the reference noise levels provided on Table 7-1, it is possible to project stationary source noise levels from the proposed project to a central point along each property line. Table 7-2 presents the noise levels from the proposed project to each property line during daytime hours (7:00 AM to 10:00 PM). These projections include, where appropriate, delivery truck noise, trash compactor noise, speakerphone use, truck loading/unloading, generator noise and noise from the mechanical ventilation system. The unmitigated cumulative noise level at the project property lines range from 39.1 dBA Leq to 66.6 dBA Leq, at the northern property line. Calculations were then completed at the northern property line that account for the designed loading dock screen wall presented in the site plan. Assuming a minimal height of 8.0 feet, the stationary noise sources from the loading dock, truck deliveries, trash compactor, and back-up generator in the northern portion of the site are reduced to 55.0 dBA which is below the County of San Diego 60 dBA Leq property line daytime noise standard.

Table 7-3 presents the noise level impacts from the proposed project to the each property line during nighttime hours (10:00 PM to 7:00 AM). The unmitigated cumulative noise level at the project property lines ranges from 39.1 to 61.7 dBA Leq, at the northern property line. With the noise reduction provided by the above mentioned loading dock screen wall, noise levels at the northern property line will be reduced to 51.6 dBA Leq and thus comply with the 55 dBA Leq nighttime property line standard.

With the incorporation of the proposed loading dock screen wall, minimum 8-foot in height, no additional mitigation is required for the project to meet the daytime or

TABLE 7-2

PROPERTY LINE NOISE LEVEL PROJECTIONS FOR DAYTIME HOURS

OBSERVER LOCATION	DISTANCE TO OBSERVER LOCATION (IN_FEET)	NOISE SOURCE	QUANTITY	UNMITIGATED NOISE LEVEL AT PROPERTY LINE FOR SINGLE PIECE OF EQUIPMENT (dBA)	CUMULATIVE NOISE LEVEL AT PROPERTY LINE (dBA)	MITIGATED NOISE LEVEL AT PROPERTY LINE (dBA)[1]
NORTHERN PROPERTY LINE	339'	A/C - RTU-1	1	30.9	30.9	-
	290'	A/C - RTU-1	1	32.3	32.3	-
	219'	A/C - RTU-1	1	34.7	34.7	-
	131'	A/C - RTU-1	1	39.2	39.2	-
	220'	A/C - RTU-1	1	34.7	34.7	-
	326'	A/C - RTU-1	1	31.3	31.3	-
	442'	A/C - RTU-1	1	28.6	28.6	-
	85'	Delivery Trucks	10	55.9	65.9	53.4
	107'	Truck Loading	1	37.0	37.0	27.2
	396'	Truck Loading	1	25.6	25.6	-
	117'	Trash Compactor	1	48.6	48.6	38.1
	143'	Back-up Generator	1	57.9	57.9	48.7
		Cumulative Noise Level at Northern Property Line:			**66.6**	**55.0**
EASTERN PROPERTY LINE	523'	A/C - RTU-1	1	27.2	27.2	-
	181'	A/C - RTU-1	1	36.4	36.4	-
	160'	A/C - RTU-1	1	37.4	37.4	-
	246'	A/C - RTU-1	1	33.7	33.7	-
	200'	Speakerphone	1	47.5	47.5	-
		Cumulative Noise Level at Eastern Property Line:			**48.0**	**-**
SOUTHERN PROPERTY LINE	231'	A/C - RTU-1	1	34.2	34.2	-
	181'	A/C - RTU-1	1	36.4	36.4	-
	356'	A/C - RTU-1	1	30.5	30.5	-
		Cumulative Noise Level at Southern Property Line:			**39.1**	**-**
WESTERN PROPERTY LINE	236'	A/C - RTU-1	1	34.1	34.1	-
	223'	A/C - RTU-1	1	34.6	34.6	-
	238'	A/C - RTU-1	1	34.0	34.0	-
	189'	Truck Loading	1	32.0	32.0	-
	206'	Truck Loading	1	31.3	31.3	-
		Cumulative Noise Level at Western Property Line:			**39.2**	**-**

1. Mitigated noise levels include noise reduction provided by 8.0' high designed loading dock wall.

TABLE 7-3

PROPERTY LINE NOISE LEVEL PROJECTIONS FOR NIGHTTIME HOURS

OBSERVER LOCATION	DISTANCE TO OBSERVER LOCATION (IN_FEET)	NOISE SOURCE	QUANTITY	UNMITIGATED NOISE LEVEL AT PROPERTY LINE FOR SINGLE PIECE OF EQUIPMENT (dBA)	CUMULATIVE NOISE LEVEL AT PROPERTY LINE (dBA)	MITIGATED NOISE LEVEL AT PROPERTY LINE (dBA)[1]
NORTHERN PROPERTY LINE	339'	A/C - RTU-1	1	30.9	30.9	-
	290'	A/C - RTU-1	1	32.3	32.3	-
	219'	A/C - RTU-1	1	34.7	34.7	-
	131'	A/C - RTU-1	1	39.2	39.2	-
	220'	A/C - RTU-1	1	34.7	34.7	-
	326'	A/C - RTU-1	1	31.3	31.3	-
	442'	A/C - RTU-1	1	28.6	28.6	-
	85'	Delivery Trucks	2	55.9	58.9	46.4
	107'	Truck Loading	1	37.0	37.0	27.2
	396'	Truck Loading	1	25.6	25.6	-
	117'	Trash Compactor	1	48.6	48.6	38.1
	143'	Back-up Generator	1	57.9	57.9	48.7
		Cumulative Noise Level at Northern Property Line:			**61.7**	**51.6**
EASTERN PROPERTY LINE	523'	A/C - RTU-1	1	27.2	27.2	-
	181'	A/C - RTU-1	1	36.4	36.4	-
	160'	A/C - RTU-1	1	37.4	37.4	-
	246'	A/C - RTU-1	1	33.7	33.7	-
	200'	Speakerphone	1	47.5	47.5	-
		Cumulative Noise Level at Eastern Property Line:			**48.0**	**-**
SOUTHERN PROPERTY LINE	231'	A/C - RTU-1	1	34.2	34.2	-
	181'	A/C - RTU-1	1	36.4	36.4	-
	356'	A/C - RTU-1	1	30.5	30.5	-
		Cumulative Noise Level at Southern Property Line:			**39.1**	**-**
WESTERN PROPERTY LINE	236'	A/C - RTU-1	1	34.1	34.1	-
	223'	A/C - RTU-1	1	34.6	34.6	-
	238'	A/C - RTU-1	1	34.0	34.0	-
	189'	Truck Loading	1	32.0	32.0	-
	206'	Truck Loading	1	31.3	31.3	-
		Cumulative Noise Level at Western Property Line:			**39.2**	**-**

[1.] Mitigated noise levels include noise reduction provided by 8.0' high designed loading dock wall.

nighttime standards at all property lines. The stationary source noise prediction calculations are included in Appendix "D."

8.0 SHORT-TERM CONSTRUCTION NOISE IMPACTS

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, and loaders can reach high levels. Grading activities typically represent one of the highest potential sources for noise impacts. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours. The site will be mass graded in one phase. According to the project applicant, a total of one CAT D-6 dozer, one CAT D-8 dozer, two skip loaders, one CAT 14 motor grader, one 2,500 gallon water truck, one CAT 824 rubber tire dozer and four CAT 637 scrapers during grading activities will be required to complete the proposed grading operations in the proposed 2-month timeframe. The noise levels utilized in this analysis are shown in Table 8-1.

8.1 Construction Related Noise Levels

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from approximately 60 dBA to noise levels in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 68 dBA measured at 50 feet from the noise source to the receptor would be reduced to 62 dBA at 100 feet from the source to the receptor, and would be further reduced to 56 dBA at 200 feet from the source to the receptor.

8.2 Grading Activities Noise Level Impact Analysis

Using a point-source noise prediction model, calculations of the expected construction noise impacts were completed. Key input data for these barrier

TABLE 8-1

CONSTRUCTION EQUIPMENT NOISE LEVELS

EQUIPMENT TYPE	SOURCE LEVEL AT 50 FEET (dBA) [1]
Dozer - D6 Cat	75
Dozer - D8 Cat	75
Skip Loader	70
CAT 14 Motor Grader	70
2,500 Gallon Water Truck	70
CAT 824 Rubber Tire Dozer	75
CAT 637 Scraper	75

1 Reference Levels Provided by Environmental Protection Agency (EPA), 1971.

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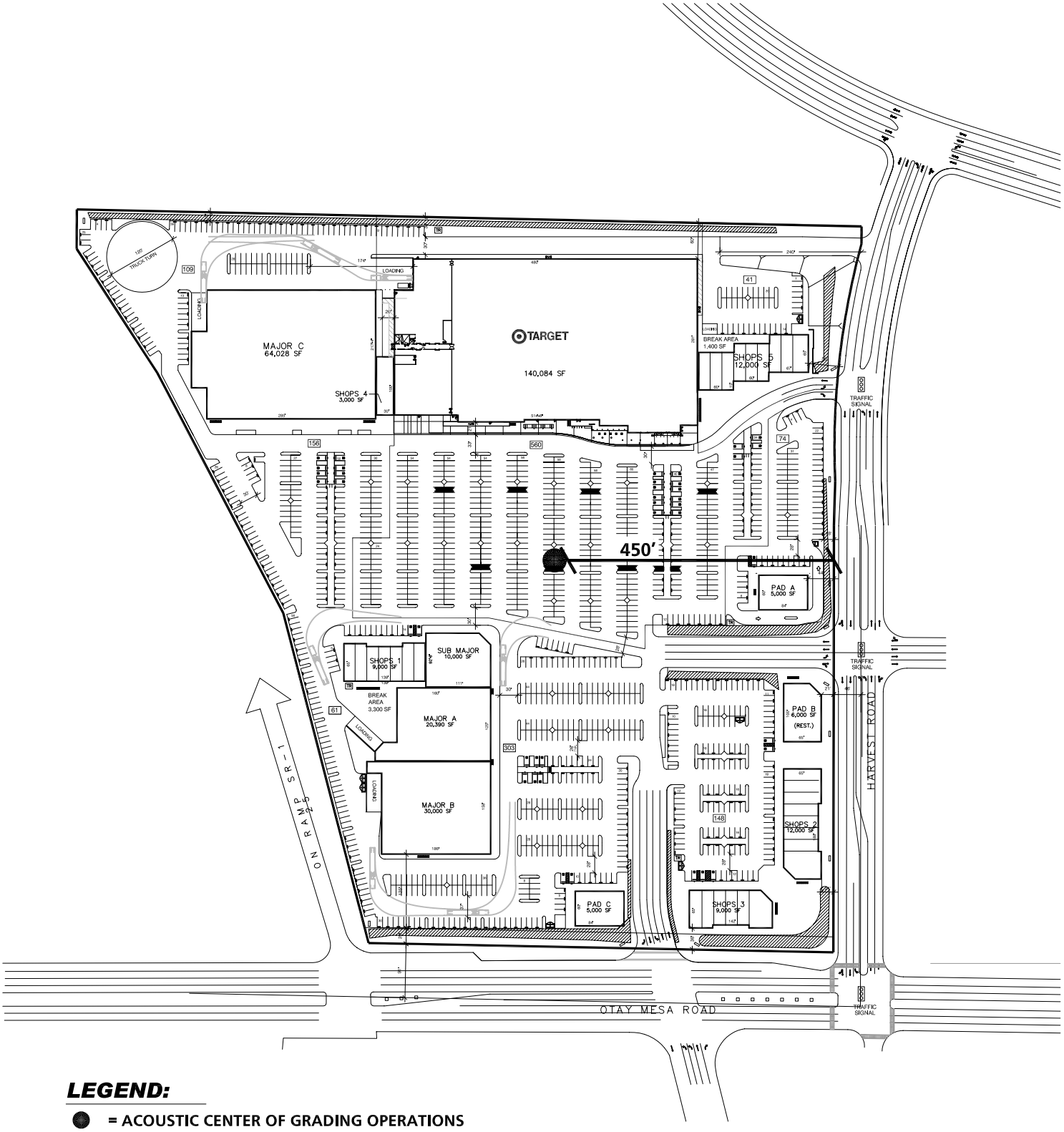
performance equations include the relative source to receiver horizontal separations, the relative source to receiver vertical separations, the typical noise source spectra and any barrier transmission loss.

The nearest property lines are located along Harvest Road and are approximately 450-feet or more from the acoustic center of proposed grading operations as shown in Exhibit 8-A. Currently, there are no noise sensitive land uses located adjacent to the project site. The project site will be mass graded in one phase. The project plans to utilize one CAT D-6 dozer, one CAT D-8 dozer, two skip loaders, one CAT 14 motor grader, one 2,500 gallon water truck, one CAT 824 rubber tire dozer and four CAT 637 scrapers. As can be seen in the Table 8-2, at a distance of 450-feet the point source noise attenuation from construction activities and the nearest property line is -19.1 dBA. Given this, the noise levels will comply with the County of San Diego's 75 dBA standard.

EXHIBIT 8-A

ACOUSTIC CENTER OF CONSTRUCTION ACTIVITIES



LEGEND:

● = ACOUSTIC CENTER OF GRADING OPERATIONS

⊢⊣ = DISTANCE TO NEAREST PROPERTY LINE

N

TABLE 8-2

CUMULATIVE CONSTRUCTION NOISE LEVELS

EQUIPMENT TYPE	QUANTITY	TIME OF OPERATION (HOURS)	SOURCE LEVEL AT 50 FEET (dBA) [1]	CUMULATIVE LEVEL AT 50 FEET (dBA)
Dozer - D6 Cat	1	8	75	75.0
Dozer - D8 Cat	1	8	75	75.0
Skip Loader	2	8	70	73.0
CAT 14 Motor Grader	1	8	70	70.0
2,500 Gallon Water Truck	1	8	70	70.0
CAT 824 Rubber Tire Dozer	1	8	75	75.0
CAT 637 Scraper	4	8	75	81.0
		CUMULATIVE LEVELS AT 50 FEET (dBA)		84.2
		DISTANCE TO PROPERTY LINE		450
		NOISE REDUCTION DUE TO DISTANCE		-19.1
		PROPERTY LINE NOISE LEVEL		**65.1**

[1] Reference Levels Provided by Environmental Protection Agency (EPA), 1971.

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9.0 AIRCRAFT NOISE IMPACTS

The project site is located within the Airport Influence Area (AIA) of Brown Field which extends east to Harvest Road. Brown Field is a general aviation airport that accommodates both propeller and jet aircraft. It serves as a port of entry for private aircraft coming into the United States from Mexico and is mostly utilized by military and law enforcement agencies.

The noise contours identified in the Comprehensive Land Use Plan (CLUP) for the Brown Field *(Source: Comprehensive Land Use Plan for Brown Field, Adopted 1981 - SANDAG, Amended 2004 - Airport Authority)* were compared with the location of the project site. It was determined that the project is outside of the identified 60 dBA CNEL contour and would not be impacted by the airport. Additionally, noise from Brown Field would be less than significant due to the lack of sensitivity related to commercial uses and no significant impact would occur.

APPENDIX A

COUNTY OF SAN DIEGO NOISE STANDARDS

(2) any sound or noise exceeding criteria standards, or levels as set forth in this chapter.

(t) Water Craft shall mean any boat, ship, barge, craft or floating thing designed for navigation in the water which is propelled by machinery, whether or not such machinery is the principal source or propulsion, but shall not include a vessel possessing a valid marine document issued by the United States Bureau of Customs or any federal agency successor thereto.

(u) Supplementary Definitions of Technical Terms - definitions of technical terms not defined herein shall be obtained from the American National Standard, "Acoustical Terminology" S1. 1-1961 (R-1971) or the latest revision thereof.

(Amended by Ord. No. 7428 (N.S.), effective 2-4-88; amended by Ord. No. 8477 (N.S.), adopted 11-8-94, operative 1-1-95; amended by Ord. No. 8975 (N.S.), adopted 12-8-98, operative 1-2-99)

Cross reference(s)--Definitions, § 12.101 et seq.

SEC. 36.403. SOUND LEVEL MEASUREMENT.

(a) Any sound or noise level measurement made pursuant to the provisions of this ordinance shall be measured with a sound level meter using the A-weighting and "slow" response pursuant to applicable manufacturer's instructions.

(b) The sound level meter shall be appropriately calibrated and adjusted as necessary by means of an acoustical calibrator of the coupler-type to assure meter accuracy within the tolerances set forth in American National Standards ANSI-SI. 4-1971.

(c) For outside measurements, the microphone shall be not less than four (4) feet above the ground, at least four (4) feet distant from walls or other large reflecting surfaces and shall be protected from the effects of wind noises by the use of appropriate wind screens and the location selected shall be at any point on the affected property. In cases when the microphone must be located within ten (10) feet of walls or similar large reflecting surfaces, the actual measured distances and orientation of sources, microphone and reflecting surfaces shall be noted and recorded. In no case shall a noise measurement be taken within five (5) feet of the noise source.

(d) For inside measurements, the microphone shall be at least three (3) feet distant from any wall, ceiling or partition, and the average measurement of at least three (3) microphone positions throughout the room shall be determined.

SEC. 36.404. SOUND LEVEL LIMITS.

Unless a variance has been applied for and granted, it shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property on which the sound is produced, exceeds the applicable limits set forth below, except that:

(1) Construction noise level limits shall be governed by Section 36.410 of this chapter; and

(2) Where a noise study has been conducted and the noise mitigation measures recommended by that study have been made conditions of approval of a Major Use Permit which authorizes the noise-generating use or activity, and the decision making body approving the Major Use Permit determined that those mitigation measures reduce potential noise impacts to a level below significance, then implementation and compliance with such noise mitigation measures shall be deemed to constitute compliance with this section.

Zone		APPLICABLE LIMIT ONE-HOUR AVERAGE SOUND LEVEL (DECIBELS)
R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-88, S-90, S-92, R-V, and R-U Use Regulations with a density of less than 11 dwelling units per acre.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45
R-RO, R-C, R-M, C-30, S-86, R-V AND R-U Use Regulations with a density of 11 or more dwelling units per acre.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50
S-94 and all other commercial zones.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55
M-50, M-52, M-54	Anytime	70
S-82, M-58, and all other industrial zones.	Anytime	75

If the measured ambient level exceeds the applicable limit noted above, the allowable one hour average sound level shall be the ambient noise level. The ambient noise level shall be measured when the alleged noise violation source is not operating.

The sound level limit at a location on a boundary between two (2) zoning districts is the arithmetic mean of the respective limits for the two districts; provided however, that the one-hour average sound level limit applicable to extractive industries, including but not limited to borrow pits and mines, shall be

75 decibels at the property line regardless of the zone where the extractive industry is actually located.

Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the noise level limits of this section, measured at or beyond six (6) feet from the boundary of the easement upon which the equipment is located.

(Amended by Ord. No. 7094 (N.S.), effective 3-25-86; amended by Ord. No. 9478 (N.S.), effective 7-19-02)

SEC. 36.405. MOTOR VEHICLES.

(a) Repairs of Motor Vehicles. It shall be unlawful for any person within the County to repair, rebuild, or test any motor vehicle in such a manner as to cause disturbing, excessive or offensive noises as defined in Section 36.402(s) of this chapter.

(b) On-Highway. Violations for exceeding applicable noise level limits as to persons operating motor vehicles on a public street or highway in the County shall be prosecuted under applicable California Vehicle Code provisions and under Federal Regulation adopted pursuant to 42 U.S.C. 4905(a)(1)(A), (B), and (C)(ii), (iii) for which enforcement responsibility is delegated to local governmental agencies.

(c) Off-Highway. Except as otherwise provided for in this ordinance, it shall be unlawful to operate any motor vehicle of any type on any site other than on a public street or highway as defined in the California Vehicle Code in a manner so as to cause noise in excess of those noise levels permitted for On-Highway motor vehicles as specified in the table "35 miles per hour or less speed limits" contained in Section 23130 of the California Vehicle Code.

(d) Emergency Vehicles. Nothing in this section shall apply to authorized emergency vehicles when being used in emergency situations.

(e) Urban Transit Buses. Buses as defined in the California Vehicle Code shall at all times comply with the requirements of this section.

SEC. 36.406. POWERED MODEL VEHICLES.

It shall be unlawful for any person to operate any powered model vehicle except between the hours of 7 a.m. and 9 p.m. and then only in such a manner so as not to emit noise in excess of those levels set forth in Section 36.404; however, if powered model vehicles are operated in public parks at a point more than 100 feet from the property line, the noise level shall be determined at a distance of 100 feet from the noise source instead of at the property line, and

noises from powered model vehicles measured at that distance in excess of the noise limits specified in Section 36.404 are prohibited.

SEC. 36.407. REFUSE VEHICLES & PARKING LOT SWEEPERS.

No person shall operate, or permit to be operated, a refuse compacting, processing, or collection vehicle or parking lot sweeper between the hours of 10 p.m. to 6 a.m. in or adjacent to any residential zone unless a variance has been applied for and granted pursuant to this chapter.

(Amended by Ord. No. 7428 (N.S.), effective 2-4-88)

SEC. 36.408. WATERCRAFT.

Violations for excessive noise of watercraft operating in waters under the jurisdiction of the County of San Diego shall be prosecuted under applicable provisions of the California Harbors and Navigation Code.

SEC. 36.409. AIRPORTS.

All noise emanating from airport activities other than that produced by aircraft shall be subject to all of the regulations contained in this ordinance.

SEC. 36.410. CONSTRUCTION EQUIPMENT.

Except for emergency work, it shall be unlawful for any person, including the County of San Diego, to operate construction equipment at any construction site, except as outlined in subsections (a) and (b) below:

(a) It shall be unlawful for any person, including the County of San Diego, to operate construction equipment at any construction site on Sundays, and days appointed by the President, Governor, or the Board of Supervisors for a public fast, Thanksgiving, or holiday. Notwithstanding the above, a person may operate construction equipment on the above-specified days between the hours of 10 a.m. and 5 p.m. in compliance with the requirements of subdivision (b) of this Section at his residence or for the purpose of constructing a residence for himself, provided such operation of construction equipment is not carried on for profit or livelihood. In addition, it shall be unlawful for any person to operate construction equipment at any construction site on Mondays through Saturdays except between the hours of 7 a.m. and 7 p.m.

(b) No such equipment, or combination of equipment regardless of age or date of acquisition, shall be operated so as to cause noise at a level in excess of seventy-five (75) decibels for more than 8 hours during any twenty-four (24) hour period when measured at or within the property lines of any property which is developed and used either in part or in whole for residential purposes.

In the event that lower noise limit standards are established for construction equipment pursuant to State or Federal law, said lower limits shall be used as a basis for revising and amending the noise level limits specified in subsection (b) above.

SEC. 36.411. CONTAINERS AND CONSTRUCTION MATERIAL.

It shall be unlawful for any person to handle or transport or cause to be handled or transported in any public place, any container or any construction material in such a way as to create a disturbing, excessive, or offensive noise as defined under Section 36.402(s) of this ordinance.

SEC. 36.412. SIGNAL DEVICE FOR FOOD TRUCKS.

No person shall operate or cause to have operated or used any sound signal device other than sound-amplification equipment attached to a motor vehicle wagon or manually propelled cart from which food or any other items are sold which emits a sound signal more frequently than once every ten minutes in any one street block and with a duration of more than ten seconds for any single emission. The sound level of this sound signal shall not exceed ninety (90) decibels at fifty (50) feet.

SEC. 36.413. MULTIPLE FAMILY DWELLING UNITS.

Notwithstanding any other provisions of this ordinance it shall be unlawful for any person to create, maintain or cause to be maintained any sound within the interior of any multiple family dwelling unit which causes the noises level to exceed those limits set forth below in any other dwelling unit:

Type of Land Use		Allowable Interior Noise Level (dBA)		
		No Time	1 min in 1 hour	5 min in 1 hour
Multifamily	10 pm- 7 am	> 45	40	35
Residential	7 am-10 pm	> 55	50	35

(> greater than)

(less than or equal to)

The monitoring procedures outlined under Section 36.403 shall be followed in enforcing this section.

SEC. 36.414. GENERAL NOISE REGULATIONS.

3.0 Policies and Regulatory Provisions

This chapter sets forth the policies, regulatory procedures and standards for implementing the East Otay Mesa Specific Plan. The policies and regulations are premised on several objectives:

- Achieve a high quality industrial and business district through good site planning and building design;
- Protect sensitive environmental resources;
- Accommodate land uses and building types appropriate to an international industrial district;
- Coordinate development with a comprehensive planned network of regional and local roads; and
- Provide public facilities and services prior to or concurrent with need.

These policies and regulatory procedures and standards shall apply to SubArea 1 of the East Otay Mesa Specific Plan.

These policies, regulatory procedures and standards shall apply to SubArea 1 of the East Otay Mesa Specific Plan. The use and employment of land, buildings or structures, and the construction, reconstruction, alteration, expansion, or relocation of any building, structure or use upon the land, shall conform to these regulations. No land, building, structure or premises shall be used for any purpose or in any manner other than as permitted in the district in which such land, building, structure, or premise is located, except as provided by the Nonconforming Use provisions of the County's Zoning Ordinance.

3.1 Land Use Regulations

Land use districts in the East Otay Mesa Specific Plan SubArea 1 Area, as shown in Figure 2.1-1, include Technology Business Park, Activity Nodes, Commercial Center (overlay), Light Industrial, Heavy Industrial, and Conservation/Limited Use. It should also be noted that all uses shall comply with applicable portions of Section 6300 et seq. of the County Zoning Ordinance: Performance Standards. Regarding noise measurements, uses in the Activity Node and Commercial Center shall comply with Section 6310.b; uses in the Technology Business Park shall comply with Section 6310.c; uses in the Light Industrial areas shall comply with Section 6310.d; uses in the

Heavy Industrial areas shall comply with Section 6310.e; and uses in the Conservation/Limited Use areas shall comply with Section 6310.b.

The *Technology Business Park District* is intended to accommodate research and development as well as manufacturing of goods and materials associated with emerging industries in San Diego County.

Activity Nodes are intended to create a focal point for daily operations and employee needs within East Otay Mesa. Development standards requiring pedestrian oriented designs will help create a sense of place, unique to East Otay Mesa and the proposed Technology Business Park development.

The *Commercial Center overlay* is intended to accommodate an appropriate range of retail goods and services for the employee population and bi-national traffic.

The *Light Industrial Use District* is intended to accommodate general industrial plants primarily engaged in manufacturing.

The Heavy *Industrial Use District* is intended to accommodate all of the uses allowed in the Technology Business Park and Light Industrial Districts plus recycling and salvage uses.

The *Conservation/Limited Use* designation is applied to areas of the Specific Plan containing steeper slopes and possible significant biological resources.

Parcels with a "G" Designator shall comply with the County Zoning Ordinance Sensitive Resources Area Regulations Sections 5300 – 5307. In addition, the Specific Plan requires the preparation of a Resource Conservation Plan for all parcels with the "G" Designator.

Table 3.1-1 identifies permitted and conditionally permitted land uses by district. Similar to the County Zoning Ordinance, the Specific Plan specifies permitted uses (P), uses subject to a Minor Use Permit (m), uses subject to a Major Use Permit (M). Where the box is blank, use is not permitted. Also included are interim uses (I) that are allowed only by a Major Use Permit to be issued or renewed for up to five years, only with the finding that "a reasonable projection of market demand indicates that it is unlikely that

any allowed permanent use (approved or in house for processing) will be sited within five years that would be negatively impacted by the Interim Use.

In Table 3.1-1, the number in parentheses following each use refers to the use classification described in the County Zoning Ordinance, Sections 1200 through 1899. These sections of The Zoning Ordinance describe the land uses in more detail. The following uses are specifically prohibited in the East Otay Mesa Specific Plan SubArea 1:

- Manufacturing or storage of explosives;
- Permanent storage of toxic waste;
- Cemeteries;
- Animal Auctioning;
- Stockyards;
- Animal rendering plants; and
- Mining and processing.

All proposed development in East Otay Mesa shall require approval of a Site Plan, described in Section 3.3.1 of this Specific Plan, unless a Major Use Permit or other discretionary permit has already addressed the criteria set forth in this Specific Plan or was approved prior to the adoption of this Specific Plan Amendment.

6308 NOISE LEVEL MEASUREMENT.
The following provisions shall determine means for measuring noise levels. Where these provisions conflict with other provisions of the San Diego County Code, the following shall remain applicable for purposes of the Zoning Ordinance.

a. Setting of Meter. Any sound or noise level measurement made pursuant to the provisions of this ordinance shall be measured with a sound level meter using the A-weighting and "slow" response pursuant to applicable manufacturer's instructions, except that for sounds of a duration of 2 seconds or less the "fast" response shall be used and the average level during the occurrence of the sound reported.

b. Calibration of Meter. The sound level meter shall be appropriately calibrated and adjusted as necessary by means of acoustical calibrator of the coupler-type to assure meter accuracy within the tolerances set forth in American National Standards ANSI-SI.4-1971.

c. Location of Microphone. All measurements shall be taken at any lot line of the lot containing the use, except as otherwise provided by this subsection. For outside measurements, the measuring microphone shall not be less than 4 feet above the ground, at least 4 feet distance from walls or other large reflecting surfaces and shall be protected from the effects of wind noises by the use of appropriate wind screens. In cases when the microphone must be located within 10 feet of walls or similar large reflecting surfaces, the actual measured distances and orientation of sources, microphone and reflecting of surfaces shall be noted and recorded. In no case shall a noise measurement be taken within 5 feet of the noise source.

d. Measured Sound Levels. The measurement of sound level limits shall be the average sound level for a period of one hour.

6310 NOISE LIMITS.
The following noise level limits shall be applicable, provided that no intermittent sound may exceed the limit by 33 percent.

a. Residential Zone. The noise level limit for industrial or commercial uses located in a residential zone shall be 40 decibels.

b. Commercial Zone. The noise level limit for uses located in a commercial zone shall be 60 decibels.

c. M50 & M52 Use Regulations. The noise level limit for uses located in a zone subject to the M50 and M52 Use Regulations shall be 70 decibels.

d. M54 and M58 Use Regulations. The noise level limit for uses located in a zone subject to the M54 Use Regulations, or in the M58 Use Regulations within 400 feet of any boundary of a residential zone, shall be 75 decibels.

e. M58 Use Regulations. The noise level limit for uses located in a zone subject to the M58 Use Regulations other than within 400 feet of any boundary of a residential zone, shall be 80 decibels.

(Amended by Ord. No. 5508 (N.S.) adopted 5-16-79)

6312 NOISE CORRECTION FACTORS.
The following correction factors, when applicable, shall be applied to the maximum noise level limits indicated in Section 6310:

Time of Type of Noise	Correction in Maximum Permitted Decibels
For uses located in a residential zone: Emission only between 7 a.m. and the next ensuing 7 p.m.	Plus 10
or	
Emission only between 7 p.m. and the next ensuing 10 p.m.	Plus 5
For uses located in a commercial zone: Emission only between 7 p.m. and next ensuing 7 a.m.	Minus 5
Noise of unusual impulsive character, such as hammering	Minus 5
Noise rising or falling in pitch or volume, such as humming, screeching or pulsating	Minus 5
Noise of unusually high sound frequency (more than 5000 cycles per second)	Minus 25

(Amended by Ord. No. 5508 (N.S.) adopted 5-16-79)

APPENDIX B

NOISE CONTOUR CALCULATIONS

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: Britannia Blvd. to La Media Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,999 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,900 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.57	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-2.96	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-4.21	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.2	70.5	65.9	63.8	71.8	72.1
Medium Trucks:	76.3	74.6	70.0	67.9	75.9	76.2
Heavy Trucks:	79.1	77.3	72.8	70.7	78.6	78.9
Vehicle Noise:	81.5	79.7	75.2	73.1	81.0	81.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1,396	4,416	13,965	44,161
CNEL:	1,494	4,724	14,939	47,241

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: La Media Rd. to Piper Ranch Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	44,523 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,452 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.76	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-3.77	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-5.02	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.8	68.1	63.5	61.4	69.4	69.7
Medium Trucks:	74.1	72.3	67.8	65.7	73.7	74.0
Heavy Trucks:	77.2	75.5	70.9	68.8	76.8	77.1
Vehicle Noise:	79.5	77.7	73.1	71.1	79.0	79.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	878	2,777	8,781	27,768
CNEL:	939	2,970	9,393	29,704

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: Piper Ranch Rd. to SR-125

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,109 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,311 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.21	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-4.32	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-5.57	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.9	69.1	64.6	62.5	70.4	70.7
Medium Trucks:	75.0	73.2	68.6	66.6	74.5	74.8
Heavy Trucks:	77.7	75.9	71.4	69.3	77.3	77.6
Vehicle Noise:	80.1	78.4	73.8	71.7	79.7	80.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1,020	3,227	10,204	32,267
CNEL:	1,092	3,452	10,915	34,518

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: SR-125 to Interim SR-905 Conne

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,686 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,669 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-1.50	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-8.03	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-9.28	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.6	63.8	59.3	57.2	65.1	65.4
Medium Trucks:	69.8	68.1	63.5	61.4	69.4	69.7
Heavy Trucks:	73.0	71.2	66.7	64.6	72.5	72.8
Vehicle Noise:	75.2	73.4	68.9	66.8	74.8	75.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	329	1,041	3,291	10,407
CNEL:	352	1,113	3,520	11,132

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: Interim SR-905 Connector to Harv

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,738 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	974 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-3.84	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-10.37	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-11.62	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.2	61.5	56.9	54.8	62.8	63.1
Medium Trucks:	67.5	65.7	61.2	59.1	67.1	67.4
Heavy Trucks:	70.6	68.9	64.3	62.2	70.2	70.5
Vehicle Noise:	72.9	71.1	66.5	64.5	72.4	72.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	192	607	1,921	6,073
CNEL:	205	650	2,054	6,497

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: Harvest Rd. to Sanyo Ave.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,224 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	822 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.60	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-10.13	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-11.38	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.4	57.7	53.1	51.0	59.0	59.3
Medium Trucks:	64.1	62.3	57.8	55.7	63.7	64.0
Heavy Trucks:	68.1	66.4	61.8	59.7	67.7	68.0
Vehicle Noise:	70.0	68.2	63.7	61.6	69.5	69.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	99	313	988	3,125
CNEL:	106	334	1,057	3,343

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Airway Road
Road Segment: Sanyo Ave. to Paseo de La Ameri

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,649 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	565 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-5.23	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-11.77	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-13.01	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.8	56.0	51.5	49.4	57.4	57.6
Medium Trucks:	62.5	60.7	56.1	54.1	62.0	62.3
Heavy Trucks:	66.5	64.7	60.2	58.1	66.1	66.3
Vehicle Noise:	68.3	66.6	62.0	59.9	67.9	68.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	68	215	679	2,147
CNEL:	73	230	726	2,296

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Siempre Viva Road
Road Segment: SR-905 to Paseo de Las America

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,653 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,665 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.12	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-6.41	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-7.66	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.8	67.0	62.5	60.4	68.3	68.6
Medium Trucks:	72.9	71.1	66.6	64.5	72.4	72.7
Heavy Trucks:	75.6	73.9	69.3	67.2	75.2	75.5
Vehicle Noise:	78.0	76.3	71.7	69.6	77.6	77.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	631	1,995	6,309	19,950
CNEL:	675	2,134	6,749	21,341

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: La Media Road
Road Segment: Interim SR-905 (Otay Mesa Rd.) t

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,225 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,523 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.93	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-7.46	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-8.71	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.1	60.3	55.8	53.7	61.7	62.0
Medium Trucks:	66.8	65.0	60.5	58.4	66.3	66.6
Heavy Trucks:	70.8	69.0	64.5	62.4	70.4	70.7
Vehicle Noise:	72.6	70.9	66.3	64.2	72.2	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	183	579	1,830	5,786
CNEL:	196	619	1,957	6,189

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: SR-125
Road Segment: North of Otay Mesa Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,000 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	64 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	105.361
Medium Trucks:	105.277
Heavy Trucks:	105.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.64	-3.31	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-5.90	-3.30	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-7.15	-3.30	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.1	67.3	62.8	60.7	68.7	69.0
Medium Trucks:	73.2	71.4	66.9	64.8	72.8	73.1
Heavy Trucks:	75.9	74.2	69.6	67.5	75.5	75.8
Vehicle Noise:	78.4	76.6	72.0	69.9	77.9	78.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	680	2,151	6,803	21,512
CNEL:	728	2,301	7,277	23,012

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Existing SR-905
Road Segment: Otay Mesa Rd. to Siempre Viva R

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,823 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,782 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	74 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	103.711
Medium Trucks:	103.626
Heavy Trucks:	103.634

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.06	-3.24	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-4.48	-3.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-5.73	-3.23	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.0	67.3	62.7	60.6	68.6	68.9
Medium Trucks:	73.3	71.5	67.0	64.9	72.9	73.1
Heavy Trucks:	76.4	74.7	70.1	68.0	76.0	76.3
Vehicle Noise:	78.6	76.9	72.3	70.2	78.2	78.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	728	2,301	7,276	23,007
CNEL:	778	2,461	7,783	24,612

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Existing SR-905
Road Segment: South of Siempre Viva Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,800 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	64 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	105.361
Medium Trucks:	105.277
Heavy Trucks:	105.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.34	-3.31	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-6.20	-3.30	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-7.45	-3.30	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.8	67.1	62.5	60.4	68.4	68.7
Medium Trucks:	72.9	71.1	66.6	64.5	72.5	72.8
Heavy Trucks:	75.6	73.9	69.3	67.2	75.2	75.5
Vehicle Noise:	78.1	76.3	71.7	69.6	77.6	77.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	635	2,008	6,349	20,077
CNEL:	679	2,148	6,792	21,478

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Harvest Road
Road Segment: North of Otay Mesa Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	0 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-52.75	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-59.28	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-60.53	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	10.3	8.5	4.0	1.9	9.8	10.1
Medium Trucks:	14.9	13.2	8.6	6.5	14.5	14.8
Heavy Trucks:	19.0	17.2	12.7	10.6	18.5	18.8
Vehicle Noise:	20.8	19.1	14.5	12.4	20.4	20.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	0
CNEL:	0	0	0	0

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Sanyo Avenue
Road Segment: Otay Mesa Rd. to Airway Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,666 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	267 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	107.238
Medium Trucks:	107.156
Heavy Trucks:	107.164

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-9.01	-3.38	0.00	*-1.04*	0.000	0.000
Medium Trucks:	79.45	-15.54	-3.38	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	84.25	-16.79	-3.38	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	56.1	54.3	49.8	47.7	55.6	55.9
Medium Trucks:	60.5	58.8	54.2	52.1	60.1	60.4
Heavy Trucks:	64.1	62.3	57.8	55.7	63.6	63.9
Vehicle Noise:	66.1	64.4	59.8	57.7	65.7	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	41	129	407	1,289
CNEL:	44	138	436	1,379

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex
Road Name: Paseo De Las Americas
Road Segment: Airway Rd. to Siempre Viva Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	530 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	107.238
Medium Trucks:	107.156
Heavy Trucks:	107.164

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-6.02	-3.38	0.00	*-1.04*	0.000	0.000
Medium Trucks:	79.45	-12.55	-3.38	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	84.25	-13.80	-3.38	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.1	57.3	52.7	50.7	58.6	58.9
Medium Trucks:	63.5	61.8	57.2	55.1	63.1	63.4
Heavy Trucks:	67.1	65.3	60.7	58.7	66.6	66.9
Vehicle Noise:	69.1	67.3	62.8	60.7	68.7	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	81	256	810	2,562
CNEL:	87	274	867	2,740

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: Britannia Blvd. to La Media Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	60,275 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,028 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.67	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-2.87	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-4.12	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.3	70.6	66.0	63.9	71.9	72.2
Medium Trucks:	76.4	74.7	70.1	68.0	76.0	76.3
Heavy Trucks:	79.2	77.4	72.8	70.8	78.7	79.0
Vehicle Noise:	81.6	79.8	75.2	73.2	81.1	81.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1,427	4,512	14,267	45,116
CNEL:	1,526	4,826	15,262	48,263

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: La Media Rd. to Piper Ranch Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	46,357 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,636 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.94	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-3.59	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-4.84	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.0	68.3	63.7	61.6	69.6	69.9
Medium Trucks:	74.3	72.5	68.0	65.9	73.8	74.1
Heavy Trucks:	77.4	75.6	71.1	69.0	77.0	77.3
Vehicle Noise:	79.6	77.9	73.3	71.2	79.2	79.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	914	2,891	9,143	28,911
CNEL:	978	3,093	9,780	30,928

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: Piper Ranch Rd. to SR-125

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,103 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,510 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.41	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-4.13	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-5.38	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.1	69.3	64.7	62.7	70.6	70.9
Medium Trucks:	75.2	73.4	68.8	66.8	74.7	75.0
Heavy Trucks:	77.9	76.1	71.6	69.5	77.5	77.8
Vehicle Noise:	80.3	78.5	74.0	71.9	79.9	80.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1,068	3,376	10,676	33,760
CNEL:	1,142	3,611	11,420	36,114

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: SR-125 to Interim SR-905 Conne

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,091 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,409 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	0.10	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-6.44	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-7.68	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.2	65.4	60.9	58.8	66.7	67.0
Medium Trucks:	71.4	69.7	65.1	63.0	71.0	71.3
Heavy Trucks:	74.6	72.8	68.2	66.2	74.1	74.4
Vehicle Noise:	76.8	75.0	70.5	68.4	76.4	76.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	475	1,502	4,751	15,025
CNEL:	508	1,607	5,083	16,073

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: Interim SR-905 Connector to Harv

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,409 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,341 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-0.03	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-6.56	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-7.81	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.0	65.3	60.7	58.6	66.6	66.9
Medium Trucks:	71.3	69.6	65.0	62.9	70.9	71.2
Heavy Trucks:	74.4	72.7	68.1	66.0	74.0	74.3
Vehicle Noise:	76.7	74.9	70.3	68.3	76.2	76.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	462	1,460	4,617	14,599
CNEL:	494	1,562	4,939	15,618

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: Harvest Rd. to Sanyo Ave.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,604 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,460 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-1.11	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-7.64	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-8.89	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.9	60.2	55.6	53.5	61.5	61.8
Medium Trucks:	66.6	64.8	60.3	58.2	66.2	66.4
Heavy Trucks:	70.6	68.9	64.3	62.2	70.2	70.5
Vehicle Noise:	72.5	70.7	66.1	64.1	72.0	72.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	175	555	1,755	5,550
CNEL:	188	594	1,877	5,937

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Airway Road
Road Segment: Sanyo Ave. to Paseo de La Ameri

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,029 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,203 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-1.95	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-8.48	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-9.73	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.1	59.3	54.8	52.7	60.6	60.9
Medium Trucks:	65.7	64.0	59.4	57.3	65.3	65.6
Heavy Trucks:	69.8	68.0	63.5	61.4	69.3	69.6
Vehicle Noise:	71.6	69.9	65.3	63.2	71.2	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	145	457	1,446	4,571
CNEL:	155	489	1,546	4,890

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Siempre Viva Road
Road Segment: SR-905 to Paseo de Las America

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,033 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,303 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.05	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-5.48	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-6.73	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.7	68.0	63.4	61.3	69.3	69.6
Medium Trucks:	73.8	72.0	67.5	65.4	73.4	73.7
Heavy Trucks:	76.6	74.8	70.2	68.1	76.1	76.4
Vehicle Noise:	79.0	77.2	72.6	70.6	78.5	78.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	782	2,473	7,819	24,725
CNEL:	836	2,645	8,364	26,450

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: La Media Road
Road Segment: Interim SR-905 (Otay Mesa Rd.) t

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,783 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,578 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.77	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-7.30	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-8.55	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.3	60.5	55.9	53.8	61.8	62.1
Medium Trucks:	66.9	65.2	60.6	58.5	66.5	66.8
Heavy Trucks:	71.0	69.2	64.6	62.6	70.5	70.8
Vehicle Noise:	72.8	71.0	66.5	64.4	72.4	72.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	190	600	1,897	5,998
CNEL:	203	642	2,029	6,416

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: SR-125
Road Segment: North of Otay Mesa Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,190 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,319 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	64 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	105.361
Medium Trucks:	105.277
Heavy Trucks:	105.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.07	-3.31	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-5.46	-3.30	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-6.71	-3.30	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.5	67.8	63.2	61.1	69.1	69.4
Medium Trucks:	73.6	71.9	67.3	65.2	73.2	73.5
Heavy Trucks:	76.4	74.6	70.1	68.0	75.9	76.2
Vehicle Noise:	78.8	77.0	72.5	70.4	78.4	78.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	753	2,380	7,526	23,799
CNEL:	805	2,546	8,051	25,459

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Existing SR-905
Road Segment: Otay Mesa Rd. to Siempre Viva R

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	42,209 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,221 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	74 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	103.711
Medium Trucks:	103.626
Heavy Trucks:	103.634

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.53	-3.24	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-4.00	-3.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-5.25	-3.23	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.5	67.7	63.2	61.1	69.1	69.4
Medium Trucks:	73.8	72.0	67.4	65.4	73.3	73.6
Heavy Trucks:	76.9	75.1	70.6	68.5	76.5	76.8
Vehicle Noise:	79.1	77.4	72.8	70.7	78.7	79.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	812	2,568	8,119	25,675
CNEL:	869	2,747	8,686	27,466

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Existing SR-905
Road Segment: South of Siempre Viva Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,165 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,917 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	64 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	105.361
Medium Trucks:	105.277
Heavy Trucks:	105.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.79	-3.31	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-4.74	-3.30	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-5.99	-3.30	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.3	68.5	63.9	61.9	69.8	70.1
Medium Trucks:	74.4	72.6	68.0	66.0	73.9	74.2
Heavy Trucks:	77.1	75.3	70.8	68.7	76.7	77.0
Vehicle Noise:	79.5	77.7	73.2	71.1	79.1	79.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	888	2,808	8,881	28,083
CNEL:	950	3,004	9,500	30,042

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Harvest Road
Road Segment: North of Otay Mesa Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,507 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,051 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	0.37	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-6.17	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-7.42	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.4	61.6	57.1	55.0	63.0	63.2
Medium Trucks:	68.1	66.3	61.7	59.7	67.6	67.9
Heavy Trucks:	72.1	70.3	65.8	63.7	71.7	71.9
Vehicle Noise:	73.9	72.2	67.6	65.5	73.5	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	246	779	2,464	7,793
CNEL:	264	834	2,636	8,337

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Sanyo Avenue
Road Segment: Otay Mesa Rd. to Airway Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,046 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	905 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	107.238
Medium Trucks:	107.156
Heavy Trucks:	107.164

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-3.70	-3.38	0.00	*-1.04*	0.000	0.000
Medium Trucks:	79.45	-10.23	-3.38	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	84.25	-11.48	-3.38	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.4	59.6	55.1	53.0	60.9	61.2
Medium Trucks:	65.8	64.1	59.5	57.4	65.4	65.7
Heavy Trucks:	69.4	67.6	63.1	61.0	69.0	69.2
Vehicle Noise:	71.4	69.7	65.1	63.0	71.0	71.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	138	437	1,383	4,372
CNEL:	148	468	1,479	4,677

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Ex + P
Road Name: Paseo De Las Americas
Road Segment: Airway Rd. to Siempre Viva Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,680 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,168 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	107.238
Medium Trucks:	107.156
Heavy Trucks:	107.164

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.59	-3.38	0.00	*-1.04*	0.000	0.000
Medium Trucks:	79.45	-9.12	-3.38	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	84.25	-10.37	-3.38	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.5	60.7	56.2	54.1	62.1	62.3
Medium Trucks:	66.9	65.2	60.6	58.5	66.5	66.8
Heavy Trucks:	70.5	68.7	64.2	62.1	70.1	70.4
Vehicle Noise:	72.5	70.8	66.2	64.1	72.1	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	179	565	1,785	5,646
CNEL:	191	604	1,910	6,039

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: Britannia Blvd. to La Media Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,591 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,159 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.79	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-7.33	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-8.57	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.9	66.1	61.5	59.5	67.4	67.7
Medium Trucks:	72.0	70.2	65.6	63.6	71.5	71.8
Heavy Trucks:	74.7	72.9	68.4	66.3	74.3	74.6
Vehicle Noise:	77.1	75.3	70.8	68.7	76.7	77.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	511	1,616	5,111	16,161
CNEL:	547	1,729	5,467	17,288

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: La Media Rd. to Piper Ranch Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,386 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,339 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-0.03	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-6.56	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-7.81	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.0	65.3	60.7	58.6	66.6	66.9
Medium Trucks:	71.3	69.5	65.0	62.9	70.9	71.2
Heavy Trucks:	74.4	72.7	68.1	66.0	74.0	74.3
Vehicle Noise:	76.7	74.9	70.3	68.3	76.2	76.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	461	1,459	4,612	14,585
CNEL:	493	1,560	4,934	15,602

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: Piper Ranch Rd. to SR-125

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,376 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,938 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.26	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-7.80	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-9.04	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.4	65.6	61.1	59.0	67.0	67.3
Medium Trucks:	71.5	69.7	65.2	63.1	71.1	71.3
Heavy Trucks:	74.2	72.5	67.9	65.8	73.8	74.1
Vehicle Noise:	76.6	74.9	70.3	68.2	76.2	76.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	459	1,450	4,586	14,503
CNEL:	491	1,551	4,906	15,515

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: SR-125 to Interim SR-905 Conne

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,781 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,678 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-1.47	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-8.01	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-9.26	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.6	63.8	59.3	57.2	65.2	65.5
Medium Trucks:	69.9	68.1	63.5	61.5	69.4	69.7
Heavy Trucks:	73.0	71.2	66.7	64.6	72.6	72.9
Vehicle Noise:	75.2	73.5	68.9	66.8	74.8	75.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	331	1,047	3,310	10,466
CNEL:	354	1,120	3,540	11,196

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: Interim SR-905 Connector to Harv

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,682 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,568 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-1.77	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-8.30	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-9.55	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.3	63.5	59.0	56.9	64.9	65.2
Medium Trucks:	69.6	67.8	63.3	61.2	69.1	69.4
Heavy Trucks:	72.7	70.9	66.4	64.3	72.3	72.6
Vehicle Noise:	74.9	73.2	68.6	66.5	74.5	74.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	309	978	3,093	9,780
CNEL:	331	1,046	3,309	10,463

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: Harvest Rd. to Sanyo Ave.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,484 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	848 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.47	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-10.00	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-11.25	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.6	57.8	53.2	51.2	59.1	59.4
Medium Trucks:	64.2	62.5	57.9	55.8	63.8	64.1
Heavy Trucks:	68.3	66.5	61.9	59.9	67.8	68.1
Vehicle Noise:	70.1	68.3	63.8	61.7	69.7	70.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	102	322	1,020	3,224
CNEL:	109	345	1,091	3,449

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Airway Road
Road Segment: Sanyo Ave. to Paseo de La Ameri

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,644 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,164 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	74 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	103.711
Medium Trucks:	103.626
Heavy Trucks:	103.634

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-3.06	-3.24	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-9.59	-3.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-10.84	-3.23	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.9	62.1	57.6	55.5	63.5	63.8
Medium Trucks:	68.2	66.4	61.9	59.8	67.7	68.0
Heavy Trucks:	71.3	69.5	65.0	62.9	70.9	71.2
Vehicle Noise:	73.5	71.8	67.2	65.1	73.1	73.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	224	708	2,240	7,083
CNEL:	240	758	2,396	7,577

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Siempre Viva Road
Road Segment: SR-905 to Paseo de Las America

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	49,239 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,924 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.79	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-3.74	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-4.99	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.4	69.7	65.1	63.0	71.0	71.3
Medium Trucks:	75.5	73.8	69.2	67.1	75.1	75.4
Heavy Trucks:	78.3	76.5	72.0	69.9	77.8	78.1
Vehicle Noise:	80.7	78.9	74.4	72.3	80.3	80.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1,165	3,686	11,655	36,855
CNEL:	1,247	3,943	12,468	39,426

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: La Media Road
Road Segment: Otay Mesa Rd. to SR-905

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,474 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,047 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	0.36	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-6.17	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-7.42	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.4	61.6	57.1	55.0	62.9	63.2
Medium Trucks:	68.1	66.3	61.7	59.7	67.6	67.9
Heavy Trucks:	72.1	70.3	65.8	63.7	71.6	71.9
Vehicle Noise:	73.9	72.2	67.6	65.5	73.5	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	246	778	2,460	7,780
CNEL:	263	832	2,632	8,323

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: La Media Road
Road Segment: SR-905 to Airway Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,910 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,691 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.47	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-7.00	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-8.25	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.6	60.8	56.2	54.1	62.1	62.4
Medium Trucks:	67.2	65.5	60.9	58.8	66.8	67.1
Heavy Trucks:	71.3	69.5	64.9	62.9	70.8	71.1
Vehicle Noise:	73.1	71.3	66.8	64.7	72.7	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	203	643	2,032	6,426
CNEL:	217	687	2,174	6,874

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: SR-125
Road Segment: North of Otay Mesa Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,030 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	64 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	105.361
Medium Trucks:	105.277
Heavy Trucks:	105.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-4.01	-3.31	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-10.54	-3.30	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-11.79	-3.30	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.5	62.7	58.1	56.1	64.0	64.3
Medium Trucks:	68.6	66.8	62.2	60.2	68.1	68.4
Heavy Trucks:	71.3	69.5	65.0	62.9	70.9	71.2
Vehicle Noise:	73.7	71.9	67.4	65.3	73.3	73.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	234	739	2,336	7,386
CNEL:	250	790	2,498	7,901

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: New SR-905
Road Segment: La Media Rd. to Siempre Viva Rd.
Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	83,381 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	8,338 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	5.07	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-1.46	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-2.71	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.7	72.0	67.4	65.3	73.3	73.6
Medium Trucks:	77.8	76.1	71.5	69.4	77.4	77.7
Heavy Trucks:	80.6	78.8	74.3	72.2	80.1	80.4
Vehicle Noise:	83.0	81.2	76.7	74.6	82.5	82.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1,974	6,241	19,736	62,411
CNEL:	2,111	6,676	21,113	66,764

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Existing SR-905
Road Segment: South of Siempre Viva Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	64,965 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,496 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	64 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	105.361
Medium Trucks:	105.277
Heavy Trucks:	105.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.99	-3.31	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-2.54	-3.30	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-3.79	-3.30	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.5	70.7	66.1	64.1	72.0	72.3
Medium Trucks:	76.6	74.8	70.2	68.2	76.1	76.4
Heavy Trucks:	79.3	77.5	73.0	70.9	78.9	79.2
Vehicle Noise:	81.7	79.9	75.4	73.3	81.3	81.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1,473	4,658	14,731	46,583
CNEL:	1,576	4,983	15,758	49,833

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Harvest Road
Road Segment: North of Otay Mesa Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,293 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	729 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-4.12	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-10.66	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-11.91	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.9	57.1	52.6	50.5	58.5	58.8
Medium Trucks:	63.6	61.8	57.3	55.2	63.1	63.4
Heavy Trucks:	67.6	65.8	61.3	59.2	67.2	67.5
Vehicle Noise:	69.5	67.7	63.1	61.0	69.0	69.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	88	277	876	2,771
CNEL:	94	296	938	2,965

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Sanyo Avenue
Road Segment: Otay Mesa Rd. to Airway Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,834 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,183 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	107.238
Medium Trucks:	107.156
Heavy Trucks:	107.164

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.53	-3.38	0.00	*-1.04*	0.000	0.000
Medium Trucks:	79.45	-9.06	-3.38	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	84.25	-10.31	-3.38	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.5	60.8	56.2	54.1	62.1	62.4
Medium Trucks:	67.0	65.2	60.7	58.6	66.6	66.9
Heavy Trucks:	70.6	68.8	64.2	62.2	70.1	70.4
Vehicle Noise:	72.6	70.8	66.3	64.2	72.2	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	181	572	1,809	5,720
CNEL:	193	612	1,935	6,119

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C w 905 Contours
Road Name: Paseo De Las Americas
Road Segment: Airway Rd. to Siempre Viva Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,254 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,625 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	107.238
Medium Trucks:	107.156
Heavy Trucks:	107.164

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.15	-3.38	0.00	*-1.04*	0.000	0.000
Medium Trucks:	79.45	-7.69	-3.38	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	84.25	-8.94	-3.38	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.9	62.2	57.6	55.5	63.5	63.8
Medium Trucks:	68.4	66.6	62.1	60.0	67.9	68.2
Heavy Trucks:	71.9	70.2	65.6	63.5	71.5	71.8
Vehicle Noise:	74.0	72.2	67.7	65.6	73.5	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	248	786	2,484	7,856
CNEL:	266	840	2,658	8,404

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: Britannia Blvd. to La Media Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,070 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,207 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.70	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-7.23	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-8.48	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.0	66.2	61.6	59.6	67.5	67.8
Medium Trucks:	72.1	70.3	65.7	63.7	71.6	71.9
Heavy Trucks:	74.8	73.0	68.5	66.4	74.4	74.7
Vehicle Noise:	77.2	75.4	70.9	68.8	76.8	77.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	522	1,652	5,224	16,519
CNEL:	559	1,767	5,588	17,672

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: La Media Rd. to Piper Ranch Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,160 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	1.28	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-5.26	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-6.51	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.4	66.6	62.0	59.9	67.9	68.2
Medium Trucks:	72.6	70.9	66.3	64.2	72.2	72.5
Heavy Trucks:	75.7	74.0	69.4	67.3	75.3	75.6
Vehicle Noise:	78.0	76.2	71.6	69.6	77.5	77.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	623	1,971	6,232	19,708
CNEL:	667	2,108	6,667	21,083

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Interim SR-905 (Otay Mesa Rd.)
Road Segment: Piper Ranch Rd. to SR-125

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,750 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,775 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.30	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-6.24	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-7.48	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.0	67.2	62.6	60.6	68.5	68.8
Medium Trucks:	73.1	71.3	66.7	64.6	72.6	72.9
Heavy Trucks:	75.8	74.0	69.5	67.4	75.4	75.7
Vehicle Noise:	78.2	76.4	71.9	69.8	77.8	78.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	657	2,077	6,568	20,771
CNEL:	703	2,222	7,026	22,220

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: SR-125 to Interim SR-905 Conne

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,330 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	1.50	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-5.03	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-6.28	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.6	66.8	62.3	60.2	68.1	68.4
Medium Trucks:	72.8	71.1	66.5	64.4	72.4	72.7
Heavy Trucks:	76.0	74.2	69.7	67.6	75.5	75.8
Vehicle Noise:	78.2	76.4	71.9	69.8	77.8	78.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	657	2,077	6,567	20,768
CNEL:	703	2,222	7,026	22,217

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: Interim SR-905 Connector to Harv

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,340 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,334 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	87 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	101.157
Medium Trucks:	101.070
Heavy Trucks:	101.078

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	1.51	-3.13	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-5.02	-3.13	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-6.27	-3.13	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.6	66.8	62.3	60.2	68.1	68.4
Medium Trucks:	72.9	71.1	66.5	64.4	72.4	72.7
Heavy Trucks:	76.0	74.2	69.7	67.6	75.5	75.8
Vehicle Noise:	78.2	76.4	71.9	69.8	77.8	78.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	658	2,079	6,575	20,793
CNEL:	703	2,224	7,034	22,243

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Otay Mesa Road (Old Otay Mesa
Road Segment: Harvest Rd. to Sanyo Ave.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,870 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,287 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-1.66	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-8.19	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-9.44	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.4	59.6	55.0	53.0	60.9	61.2
Medium Trucks:	66.0	64.3	59.7	57.6	65.6	65.9
Heavy Trucks:	70.1	68.3	63.7	61.7	69.6	69.9
Vehicle Noise:	71.9	70.2	65.6	63.5	71.5	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	155	489	1,547	4,891
CNEL:	165	523	1,654	5,232

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Airway Road
Road Segment: Sanyo Ave. to Paseo de La Ameri

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,030 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,603 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	74 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	103.711
Medium Trucks:	103.626
Heavy Trucks:	103.634

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-1.67	-3.24	0.00	*-1.04*	0.000	0.000
Medium Trucks:	81.00	-8.20	-3.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	85.38	-9.45	-3.23	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.3	63.5	59.0	56.9	64.9	65.1
Medium Trucks:	69.6	67.8	63.2	61.2	69.1	69.4
Heavy Trucks:	72.7	70.9	66.4	64.3	72.3	72.5
Vehicle Noise:	74.9	73.2	68.6	66.5	74.5	74.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	308	975	3,083	9,751
CNEL:	330	1,043	3,299	10,431

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Siempre Viva Road
Road Segment: SR-905 to Paseo de Las America

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	53,625 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,363 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.16	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-3.37	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-4.62	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.8	70.1	65.5	63.4	71.4	71.7
Medium Trucks:	75.9	74.2	69.6	67.5	75.5	75.8
Heavy Trucks:	78.7	76.9	72.3	70.3	78.2	78.5
Vehicle Noise:	81.1	79.3	74.7	72.7	80.6	80.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1,269	4,014	12,693	40,138
CNEL:	1,358	4,294	13,578	42,938

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: La Media Road
Road Segment: Otay Mesa Rd. to SR-905

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,210 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,821 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	1.75	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-4.78	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-6.03	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.8	63.0	58.5	56.4	64.3	64.6
Medium Trucks:	69.4	67.7	63.1	61.0	69.0	69.3
Heavy Trucks:	73.5	71.7	67.2	65.1	73.0	73.3
Vehicle Noise:	75.3	73.6	69.0	66.9	74.9	75.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	339	1,072	3,390	10,720
CNEL:	363	1,147	3,626	11,468

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: La Media Road
Road Segment: SR-905 to Airway Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,070 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,707 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.43	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-6.96	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-8.21	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.6	60.8	56.3	54.2	62.2	62.4
Medium Trucks:	67.3	65.5	60.9	58.9	66.8	67.1
Heavy Trucks:	71.3	69.5	65.0	62.9	70.9	71.2
Vehicle Noise:	73.1	71.4	66.8	64.7	72.7	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	205	649	2,051	6,487
CNEL:	219	694	2,194	6,939

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: SR-125
Road Segment: North of Otay Mesa Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,490 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,349 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	64 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	105.361
Medium Trucks:	105.277
Heavy Trucks:	105.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-2.84	-3.31	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-9.37	-3.30	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-10.62	-3.30	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.6	63.9	59.3	57.2	65.2	65.5
Medium Trucks:	69.7	68.0	63.4	61.3	69.3	69.6
Heavy Trucks:	72.5	70.7	66.2	64.1	72.0	72.3
Vehicle Noise:	74.9	73.1	68.6	66.5	74.4	74.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	306	967	3,059	9,673
CNEL:	327	1,035	3,272	10,348

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: New SR-905
Road Segment: La Media Rd. to Siempre Viva Rd.
Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	90,160 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	9,016 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	100.941
Medium Trucks:	100.853
Heavy Trucks:	100.861

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	5.41	-3.12	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-1.12	-3.12	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-2.37	-3.12	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	74.1	72.3	67.8	65.7	73.6	73.9
Medium Trucks:	78.2	76.4	71.8	69.8	77.7	78.0
Heavy Trucks:	80.9	79.2	74.6	72.5	80.5	80.8
Vehicle Noise:	83.3	81.6	77.0	74.9	82.9	83.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	2,134	6,748	21,341	67,485
CNEL:	2,283	7,219	22,829	72,192

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Existing SR-905
Road Segment: South of Siempre Viva Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	76,130 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	7,613 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	64 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	105.361
Medium Trucks:	105.277
Heavy Trucks:	105.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	4.68	-3.31	0.00	*-1.04*	0.000	0.000
Medium Trucks:	82.40	-1.85	-3.30	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	86.40	-3.10	-3.30	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.2	71.4	66.8	64.8	72.7	73.0
Medium Trucks:	77.2	75.5	70.9	68.8	76.8	77.1
Heavy Trucks:	80.0	78.2	73.7	71.6	79.6	79.8
Vehicle Noise:	82.4	80.6	76.1	74.0	82.0	82.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1,726	5,459	17,263	54,589
CNEL:	1,847	5,840	18,467	58,397

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Harvest Road
Road Segment: North of Otay Mesa Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,660 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,666 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	109.891
Medium Trucks:	109.810
Heavy Trucks:	109.818

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	1.51	-3.49	0.00	*-1.04*	0.000	0.000
Medium Trucks:	77.72	-5.03	-3.49	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	82.99	-6.28	-3.49	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.5	62.8	58.2	56.1	64.1	64.4
Medium Trucks:	69.2	67.4	62.9	60.8	68.8	69.1
Heavy Trucks:	73.2	71.5	66.9	64.8	72.8	73.1
Vehicle Noise:	75.1	73.3	68.8	66.7	74.6	74.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	320	1,013	3,204	10,131
CNEL:	343	1,084	3,427	10,838

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Sanyo Avenue
Road Segment: Otay Mesa Rd. to Airway Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,220 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,622 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	107.238
Medium Trucks:	107.156
Heavy Trucks:	107.164

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.16	-3.38	0.00	*-1.04*	0.000	0.000
Medium Trucks:	79.45	-7.70	-3.38	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	84.25	-8.95	-3.38	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.9	62.2	57.6	55.5	63.5	63.8
Medium Trucks:	68.4	66.6	62.1	60.0	67.9	68.2
Heavy Trucks:	71.9	70.2	65.6	63.5	71.5	71.8
Vehicle Noise:	74.0	72.2	67.6	65.6	73.5	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	248	784	2,479	7,840
CNEL:	265	839	2,652	8,387

Thursday, April 15, 2010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+C+P w 905 Contours
Road Name: Paseo De Las Americas
Road Segment: Airway Rd. to Siempre Viva Rd.

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,640 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,064 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	80.0%	7.0%	13.0%	72.00%
Medium Trucks:	80.0%	7.0%	13.0%	16.00%
Heavy Trucks:	80.0%	7.0%	13.0%	12.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	107.238
Medium Trucks:	107.156
Heavy Trucks:	107.164

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.12	-3.38	0.00	*-1.04*	0.000	0.000
Medium Trucks:	79.45	-6.65	-3.38	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	84.25	-7.90	-3.38	0.00	*-1.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.0	63.2	58.6	56.6	64.5	64.8
Medium Trucks:	69.4	67.7	63.1	61.0	69.0	69.3
Heavy Trucks:	73.0	71.2	66.7	64.6	72.5	72.8
Vehicle Noise:	75.0	73.3	68.7	66.6	74.6	74.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	315	998	3,155	9,976
CNEL:	337	1,067	3,375	10,672

Thursday, April 15, 2010

APPENDIX C

DAILY ON-SITE TRUCK TRIPS

TABLE 1
HOURLY TRUCK ACTIVITY[1]

Retail Type	Description	Approximate Hours of Delivery	Frequency/Day
Target	Local Carriers/Vendors	8:00am - 12:00pm	12/12
	Target Distribution Center Tractor Trailers	4:00am - 12:00am	2/2
Major C	Delivery Trucks	7:00am - 6:00pm[2]	4/4
Major A & B	Delivery Trucks	7:00am - 6:00pm[2]	2 each/4
Sub Major, Shops 1-3, 5, Pad A, B, & C	Miscellaneous Delivery Trucks	7:00am - 6:00pm[2]	1 each/8
Average Daily Truck Trips			30 total trucks per day

[1] Based on discussion with the project applicant

[2] Assumes miscellaneous deliveries will occur 50% in the AM peak hour and 50% in the PM peak hour

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APPENDIX D

STATIONARY SOURCE NOISE PREDICTION CALCULATIONS

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: E1

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	523.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	5.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	518.0 feet			
Noise Height:	5.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	No
Observer Elevation:	46.0 feet		*Wall Located at Noise Source Elevation:*	Yes
Noise Source Elevation:	71.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	523.0	-30.8
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**523.0**	**27.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: E2

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	181.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	5.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	176.0 feet			
Noise Height:	5.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	No
Observer Elevation:	46.0 feet		*Wall Located at Noise Source Elevation:*	Yes
Noise Source Elevation:	67.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	181.0	-21.6
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**181.0**	**36.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: E3

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	160.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	5.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	155.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	46.0 feet	*Wall Located at Noise Source Elevation:*	Yes
Noise Source Elevation:	62.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	160.0	-20.6
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**160.0**	**37.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: E4

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	246.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	5.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	241.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	46.0 feet	*Wall Located at Noise Source Elevation:*	Yes
Noise Source Elevation:	60.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	246.0	-24.3
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**246.0**	**33.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Speakerphone
Observer Location: E5

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	200.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	0.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	200.0 feet			
Noise Height:	3.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	No
Observer Elevation:	46.0 feet		*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	46.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	3.0	84.0
Distance Attenuation	200.0	-36.5
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**200.0**	**47.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: N1

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	339.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	5.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0.0	
Barrier Distance to Observer:	334.0	feet			
Noise Height:	5.0	feet			
Observer Height (Above Pad):	5.0	feet	*Barrier Breaks Line of Sight:*	No	
Observer Elevation:	8.0	feet	*Wall Located at Noise Source Elevation:*	Yes	
Noise Source Elevation:	24.0	feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	339.0	-27.1
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**339.0**	**30.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: N2

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	290.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	5.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0.0	
Barrier Distance to Observer:	285.0	feet			
Noise Height:	5.0	feet			
Observer Height (Above Pad):	5.0	feet	*Barrier Breaks Line of Sight:*	No	
Observer Elevation:	8.0	feet	*Wall Located at Noise Source Elevation:*	Yes	
Noise Source Elevation:	24.0	feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	290.0	-25.7
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**290.0**	**32.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: N3

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	219.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	5.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	214.0 feet			
Noise Height:	5.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	No
Observer Elevation:	8.0 feet		*Wall Located at Noise Source Elevation:*	Yes
Noise Source Elevation:	24.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	219.0	-23.3
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**219.0**	**34.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: N4

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	131.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	5.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	126.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	8.0 feet	*Wall Located at Noise Source Elevation:*	Yes
Noise Source Elevation:	24.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	131.0	-18.8
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**131.0**	**39.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: N5

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	220.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	5.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0.0	
Barrier Distance to Observer:	215.0	feet			
Noise Height:	5.0	feet			
Observer Height (Above Pad):	5.0	feet	*Barrier Breaks Line of Sight:*	No	
Observer Elevation:	8.0	feet	*Wall Located at Noise Source Elevation:*	Yes	
Noise Source Elevation:	24.0	feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	220.0	-23.3
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**220.0**	**34.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: N6

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	326.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	5.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0.0	
Barrier Distance to Observer:	321.0	feet			
Noise Height:	5.0	feet			
Observer Height (Above Pad):	5.0	feet	*Barrier Breaks Line of Sight:*	No	
Observer Elevation:	8.0	feet	*Wall Located at Noise Source Elevation:*	Yes	
Noise Source Elevation:	24.0	feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	326.0	-26.7
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**326.0**	**31.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: N7

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	442.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	5.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	437.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	8.0 feet	*Wall Located at Noise Source Elevation:*	Yes
Noise Source Elevation:	24.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	442.0	-29.4
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**442.0**	**28.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Delivery Trucks
Observer Location: N8

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	85.0 feet		***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	13.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	72.0 feet			
Noise Height:	8.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	8.0 feet		*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	0.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	25.0	66.5
Distance Attenuation	85.0	-10.6
Shielding (Barrier Attenuation)		-12.5
Adjusted (Distance + Barrier)	**85.0**	**43.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Truck Loading
Observer Location: N9

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	107.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	35.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	72.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	8.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	0.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	40.0	45.5
Distance Attenuation	107.0	-8.5
Shielding (Barrier Attenuation)		-9.8
Adjusted (Distance + Barrier)	**107.0**	**27.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Truck Loading
Observer Location: N10

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	396.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	0.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	396.0 feet			
Noise Height:	8.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	No
Observer Elevation:	8.0 feet		*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	0.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	40.0	45.5
Distance Attenuation	396.0	-19.9
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**396.0**	**25.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Trash Compactor
Observer Location: N11

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	117.0 feet		***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	45.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	72.0 feet			
Noise Height:	5.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	8.0 feet		*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	0.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	100.0	50.0
Distance Attenuation	117.0	-1.4
Shielding (Barrier Attenuation)		-10.5
Adjusted (Distance + Barrier)	**117.0**	**38.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Emergency Generator
Observer Location: N12

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	143.0 feet		***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	71.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	72.0 feet			
Noise Height:	5.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	8.0 feet		*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	0.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	100.0	61.0
Distance Attenuation	143.0	-3.1
Shielding (Barrier Attenuation)		-9.2
Adjusted (Distance + Barrier)	**143.0**	**48.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: S1

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	231.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	5.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0.0	
Barrier Distance to Observer:	226.0	feet			
Noise Height:	5.0	feet			
Observer Height (Above Pad):	5.0	feet	*Barrier Breaks Line of Sight:*	No	
Observer Elevation:	28.0	feet	*Wall Located at Noise Source Elevation:*	Yes	
Noise Source Elevation:	58.0	feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	231.0	-23.8
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**231.0**	**34.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: S2

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	181.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	5.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	176.0 feet			
Noise Height:	5.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	No
Observer Elevation:	28.0 feet		*Wall Located at Noise Source Elevation:*	Yes
Noise Source Elevation:	59.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	181.0	-21.6
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**181.0**	**36.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: S3

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	356.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	5.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0.0	
Barrier Distance to Observer:	351.0	feet			
Noise Height:	5.0	feet			
Observer Height (Above Pad):	5.0	feet	*Barrier Breaks Line of Sight:*	No	
Observer Elevation:	28.0	feet	*Wall Located at Noise Source Elevation:*	Yes	
Noise Source Elevation:	64.0	feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	356.0	-27.5
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**356.0**	**30.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: W1

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	236.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	5.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	231.0 feet			
Noise Height:	5.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	No
Observer Elevation:	34.0 feet		*Wall Located at Noise Source Elevation:*	Yes
Noise Source Elevation:	65.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	236.0	-23.9
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**236.0**	**34.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: W2

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	223.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	5.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0.0	
Barrier Distance to Observer:	218.0	feet			
Noise Height:	5.0	feet			
Observer Height (Above Pad):	5.0	feet	*Barrier Breaks Line of Sight:*	No	
Observer Elevation:	34.0	feet	*Wall Located at Noise Source Elevation:*	Yes	
Noise Source Elevation:	64.0	feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	223.0	-23.4
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**223.0**	**34.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: A/C RTU-1
Observer Location: W3

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	238.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	5.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	233.0 feet			
Noise Height:	5.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	No
Observer Elevation:	34.0 feet		*Wall Located at Noise Source Elevation:*	Yes
Noise Source Elevation:	64.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	15.0	58.0
Distance Attenuation	238.0	-24.0
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**238.0**	**34.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Truck Loading
Observer Location: W4

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	189.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	0.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	189.0 feet			
Noise Height:	8.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	No
Observer Elevation:	34.0 feet		*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	43.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	40.0	45.5
Distance Attenuation	189.0	-13.5
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**189.0**	**32.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Truck Loading
Observer Location: W5

Project Name: California Crossings
Job Number: 6883
Analyst: J. Stephens

NOISE MODEL INPUTS

Noise Distance to Observer	206.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	0.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	206.0 feet			
Noise Height:	8.0 feet			
Observer Height (Above Pad):	5.0 feet		*Barrier Breaks Line of Sight:*	No
Observer Elevation:	34.0 feet		*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	43.0 feet			

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*
Reference (Sample)	40.0	45.5
Distance Attenuation	206.0	-14.2
Shielding (Barrier Attenuation)		0.0
Adjusted (Distance + Barrier)	**206.0**	**31.3**

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